NAVOSH INSCAT (INSURV INSPECTOR CATALOG) INSPECTION PREPARATION AND SELF-ASSESSMENT CHECKLIST JANUARY 2002

This checklist provides a list of all potential material items that the INSURV inspector may evaluate, as applicable to your ship, during the inspection. References are provided with each inspection item. The final deficiency cards will be written using the same or similar wording to these standard cards. Deficiencies on each card were taken from the listed reference or it indicates a potential material problem commonly found during the inspection. Although this list encompasses 99% of the possible deficiencies written during an INSURV, the inspection is not limited to this list.

Manufacturers and points of contact for parts provided in this checklist are commonly used sources. This listing does not constitute an endorsement nor is it meant to exclude any other sources.

At the end of this INSCAT is an explanation of the walk-through portion of the inspection and a list of the records which you should have ready when the inspector arrives. It also explains the inspection items for general safety equipment, eyewash stations, and ventilation systems.

This checklist was updated in December 2001 to the change 1 to OPNAVINST 5100.19D, issues 1 Aug 2001.

ASBESTOS CONTROL INSPECTION ITEMS:

NOTE: Asbestos Control emergency asbestos response team (EART) requirements apply to ships whose keel was laid prior to 1980. This includes SSN 555 through 691, LSD 36 through 39, MCS 12, LHA 1 through 5, LPD 4 through 15, AOE 1 through 4, LST 1184, AS 39 and 40, DD 963 through 992, AGF 3 and 11, CV 63 through 67, FFG 8 through 13, and CVN 65 through 69. These ships are considered to have asbestos thermal insulation, which requires implementation of the EART protocol.

ALL ships with asbestos gasket materials, packing, anchor windlass or other brake linings, asbestos floor tile or underlayment, or clutch assemblies will implement the ship's force protocol for non-friable asbestos.

ASBESTOS, ASBESTOS CONTROL PLAN

THE SHIP HAD NOT HAVE AN ASBESTOS CONTROL PLAN, WITH RESOURCES AND PERSONNEL ASSIGNED TO ACCOMPLISH THE PLAN.

THE SHIP DID NOT IMPLEMENT AND MAINTAIN, AT A MINIMUM, THE ASBESTOS PROTOCOL FOR SHIP'S FORCE.

ALL APPLICABLE ASBESTOS PROTOCOLS (SPECIFY) APPROPRIATE TO THE SHIP WERE NOT IMPLEMENTED.

THE SHIP DID NOT HOLD A COPY OF THE APPROPRIATE ASBESTOS PROTOCOL.

OPNAVINST 5100.19D, B0102, B0105A, B0107

ASBESTOS, ASBESTOS HAZARD EVALUATION

THE INDUSTRIAL HYGIENE SURVEY DID NOT EVALUATE ALL WORK CENTERS TO IDENTIFY ANY HAZARDS ASSOCIATED WITH ASBESTOS, AND PROVIDE RECOMMENDED ACTIONS TO THE SHIP TO ELIMINATE OR MINIMIZE THE ASBESTOS HAZARD.

OPNAVINST 5100.19D B0104A(1)

ASBESTOS, ASBESTOS WORK RELEASE CRITERIA

APPENDIX B1-H CHECKLIST WAS NOT USED BY THE SHIP TO INSPECT SPACES WHERE ASBESTOS WORK WAS PERFORMED, PRIOR TO RELEASE OF THOSE SPACES TO UNRESTRICTED ACCESS (APPLICABLE TO BRAKE ASSEMBLY, EART AND IMA PROTOCOLS ONLY).

OPNAVINST 5100.19D, B0108B(1)(B), B0109B(1)(B), & APPENDIX B1-H

ASBESTOS, EART AEL ITEMS

ALL AEL (AEL 2-330024045) ITEMS REQUIRED FOR THE ASBESTOS EMERGENCY RESPONSE TEAM (EART) WERE NOT ONBOARD, WERE INCOMPLETE, WERE INOPERABLE AS FOLLOWS:

- DISPOSABLE COVERALLS WITH HOOD (1 BOX LARGE, 1 BOX EX LARGE).
- SURGICAL GLOVES (PKG OF 20).
- OVERSHOES, RUBBER (6 EA MED, LG, EX LG).
- INSECTICIDE SPRAYER (1 EA).
- PLASTIC SPRAY BOTTLE (4 EA).
- DUCT TAPE (20 ROLLS).
- PLASTIC SHEETING, 6 MIL (2 ROLLS).
- PAPER TOWELS (2 BOXES).
- SAFETY GOGGLES (PER WORKER).
- RESPIRATOR (DETERMINED BY RPM).
- GLOVES, CLEAN ROOM (PKG OF 20 MED & 20 LG).
- HEPA VACUUM (NILFISK GM 80. 1 EA).
- COOLING ASSEMBLY (3 EA).
- FINGER GRIP SAW (2 EA).
- KEYHOLE SAW (2 EA).
- NYLON BRUSH (2 EA).
- SCOURING PAD (3 EA).
- VENT SMOKE TUBE KIT (1 EA).
- GLASS SMOKE TUBES (10/PKG, 2 PKG).
- RED PLASTIC BAGS (1 BOX).

OPNAVINST 5100.19D, B0108D, APPENDIX B1-J

ASBESTOS, EART MEDICAL SURVEILLANCE LIST

THE ENGINEERING/REPAIR DEPARTMENT DID NOT IDENTIFY AND PROVIDE A LIST OF ALL PERSONNEL INVOLVED IN EART ASBESTOS OPERATIONS TO THE MEDICAL DEPARTMENT REPRESENTATIVE FOR CONSIDERATION FOR ENTRY IN AMSP.

OPNAVINST 5100.19D, B0108B(2)C

ASBESTOS, EART PROTOCOL

- THE SHIP DID NOT HAVE AN EMERGENCY ASBESTOS RESPONSE TEAM (EART) DESIGNATED, CONSISTING OF AT LEAST A SUPERVISOR, A CUTTER, AND A CLEANER.

- THE SHIP DID NOT HAVE A COPY OF THE EART PROTOCOL (APPENDIX B1-C).

OPNAVINST 5100.19D, B0108 & APPENDIX B1-C

ASBESTOS, EART TRAINING

- THE SHIP DID NOT ENSURE ALL EART PERSONNEL WERE GRADUATES OF THE SHIPBOARD ASBESTOS RESPONSE COURSE, A-760-2166.

- EART TRAINING WAS NOT DOCUMENTED IN THE MEMBER'S SERVICE RECORD.

OPNAVINST 5100.19D, B0108C(1)&(2)

ASBESTOS, IMA ASBESTOS REFRESHER TRAINING

- IMA ASBESTOS REMOVAL TEAM DID NOT ATTEND ASBESTOS SUPERVISOR/WORKER REFRESHER COURSE (CIN A-493-0070) ANNUALLY.

- THE IMA ASBESTOS REMOVAL TEAM REFRESHER TRAINING WAS NOT DOCUMENTED IN THE MEMBER'S SERVICE RECORD.

OPNAVINST 5100.19D, B0109D(1) AND (2) OPNAVINST 5100.19D, APPENDIX B1-G

ASBESTOS, IMA ASBESTOS REMOVAL AEL ITEMS

ALL AEL (AEL 2-330024045) ITEMS REQUIRED FOR THE IMA ASBESTOS REMOVAL TEAM WERE NOT ONBOARD, WERE INCOMPLETE, WERE INOPERABLE AS FOLLOWS:

- DISPOSABLE COVERALLS WITH HOOD (2 BOXES LARGE, 2 BOXES EX LARGE).
- SURGICAL GLOVES (PKG OF 100).
- OVERSHOES, RUBBER (18 EA MED, LG, EX LG).
- INSECTICIDE SPRAYER (3 EA).
- PLASTIC SPRAY BOTTLE (24 EA).
- DUCT TAPE (100 ROLLS).
- PLASTIC SHEETING, 6 MIL (10 ROLLS).
- PAPER TOWELS (5 BOXES).
- SAFETY GOGGLES (PER WORKER).
- RESPIRATOR (DETERMINED BY RPM).
- GLOVES, CLEAN ROOM (PKG OF 20 MED & 20 LG).
- HEPA VACUUM (1 EA HAKO, NILFISK VT60 AND NILFISK GM80).
- COOLING ASSEMBLY (6 EA).
- FINGER GRIP SAW (4 EA).
- KEYHOLE SAW (4 EA).
- NYLON BRUSH (4 EA).
- SCOURING PAD (10 EA).
- VENT SMOKE TUBE KIT (2 EA).
- GLASS SMOKE TUBES (10/PKG, 6 PKG).

- RED PLASTIC BAGS (5 BOX).

OPNAVINST 5100.19D. B0109E AND APPENDIX B1-J

ASBESTOS, IMA ASBESTOS TRAINING

- IMA ASBESTOS REMOVAL TEAM MEMBERS WERE NOT GRADUATES OF THE ASBESTOS SUPERVISOR/WORKER COURSE (CIN A-493-0069) PRIOR TO OR AT THE TIME OF THEIR INITIAL ASSIGNMENT.
- IMA ASBESTOS REMOVAL TEAM TRAINING WAS NOT DOCUMENTED IN THE MEMBER'S SERVICE RECORD.

OPNAVINST 5100.19D B0109D(1) AND (2) OPNAVINST 5100.19D. APPENDIX B1-G

ASBESTOS. IMA SAMPLE ANALYSIS PROFICIENCY

SHIP (CV, CVN, AND AS CLASS SHIPS ONLY) DID NOT HAVE AT LEAST ONE INDIVIDUAL QUALIFIED TO ANALYZE ASBESTOS BULK AND AIR SAMPLES, WHO WAS RATED PROFICIENT IN THE PROFICIENCY ANALYTICAL TESTING (PAT) AND RESEARCH TRIANGLE INSTITUTE (RTI) TESTING PROGRAMS.

OPNAVINST 5100.19D B0109B(1)(E) 29 CFR 1910.1001

ASBESTOS, MEDICAL SURVEILLANCE

THE MDR DID NOT HAVE AN ASBESTOS MEDICAL SURVEILLANCE PROGRAM (AMSP) IMPLEMENTED/HAD THE FOLLOWING DEFICIENCIES:

- PERSONNEL WITH PREVIOUS EXPOSURES WERE NOT ENTERED INTO THE AMSP.
- PERSONNEL WITH PREVIOUS EXPOSURES WERE OVERDUE FOR AMSP PHYSICAL EXAMS.
- ALL DESIGNATED IMA ASBESTOS PERSONNEL WERE NOT SCREENED AND PLACED IN THE AMSP.
- BRAKE AND CLUTCH ASSEMBLY WORKERS WERE NOT SCREENED FOR PLACEMENT IN THE AMSP, IF APPLICABLE.
- THE MDR DID NOT HAVE A LIST OF ALL EART PERSONNEL FOR CONSIDERATION FOR ENTRY IN AMSP.

OPNAVINST 5100.19D, B0108F, B0109G, APPENDIX B1-C PARA 5 NEHC TECHNICAL MANUAL, MEDICAL SURVEILLANCE PROCEDURES MANUAL AND MEDICAL MATRIX, NEHC-TM-6260.96-1

ASBESTOS, NON-FRIABLE AEL ITEMS

ALL AEL (AEL 2-330024045) ITEMS REQUIRED FOR NON-FRIABLE ASBESTOS HANDLING WERE NOT ONBOARD. WERE INCOMPLETE. WERE INOPERABLE AS FOLLOWS:

- SURGICAL GLOVES (PKG OF 10).
- PLASTIC SPRAY BOTTLE (4 EA).
- PAPER TOWELS (1 BOX).
- SAFETY GOGGLES (PER WORKER).
- RESPIRATOR (DETERMINED BY RPM).
- GLOVES, CLEAN ROOM (PKG OF 10 MED & 10 LG).
- HEPA VACUUM (NILFISK GM 80, 1 EA).
- RED PLASTIC BAGS (1 BOX).

- WARNING SIGNS - ORDER AS REQUIRED.

OPNAVINST 5100.19D, APPENDIX B1-J AEL 2-330024045

ASBESTOS, NON-FRIABLE ASBESTOS TRNG

ALL PERSONNEL CURRENTLY EXPOSED TO OR WITH THE POTENTIAL TO BE EXPOSED TO NON-FRIABLE ASBESTOS (GASKET MATERIAL, FLOOR TILE, OR BRAKE LININGS), AND THEIR DIVISION OFFICER AND WORK CENTER SUPERVISOR, HAD NOT RECEIVED ASBESTOS TRAINING PRIOR TO OR AT THE TIME OF THEIR INITIAL ASSIGNMENT.

OPNAVINST 5100.19D, B0107C(1), APPENDIX B1-E

ASBESTOS, NON-FRIABLE MATERIAL STOWAGE

- NON-FRIABLE ASBESTOS-CONTAINING MATERIALS (SUCH AS GARLOCK GASKET MATERIAL AND PACKING) WERE NOT STORED IN DOUBLE, HEAVY-DUTY PLASTIC BAGS OR IMPERMEABLE CONTAINERS.

FOR EXAMPLE: THE MOST COMMON ASBESTOS CONTAINING GASKET MATERIAL ON SHIPS IS GARLOCK 7735, 5330-00-658-8090. THE BLUEGARD GARLOCK 7300 PRODUCTS ARE NON-ASBESTOS.

- NON-FRIABLE ASBESTOS-CONTAINING MATERIALS WERE NOT LABELED WITH STANDARD ASBESTOS LABELS. WARNING LABELS MUST CONTAIN THE WORDS "DANGER, CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD."

OPNAVINST 5100.19D, B0104D(1)

ELECTRICAL SAFETY INSPECTION ITEMS:

The NAVOSH inspector will review the following administrative items pertaining to electrical safety. The INSURV Electrical Inspector will document electrical material hazards, such as over-fusing, open wiring, safety matting, etc.

ELECTRICAL SAFETY, CPR TRAINING

AT LEAST 50 PERCENT OF ALL ELECTRICAL/ELECTRONICS ASSOCIATED RATINGS WERE NOT CERTIFIED IN BASIC LIFE SUPPORT.

SHIP DID NOT HAVE A CERTIFIED AMERICAN RED CROSS/AMERICAN HEART ASSOCIATION CPR INSTRUCTOR ON BOARD.

OPNAVINST 5100.19D, ARTICLE B0708B

ELECTRICAL SAFETY, ELECTRICAL HAZARDS

ELECTRICAL HAZARDS (SPECIFY) WERE FOUND IN THE FOLLOWING LOCATIONS: EXAMPLE: DEAD-ENDED CABLES NOT SEALED OR TAGGED, WIRES PULLED FROM RECEPTACLES OR EQUIPMENT, EXPOSED WIRING, MISSING COVER PLATES, DAMAGED PLUGS, ETC.

OPNAVINST 5100.19D, CHAPTER B7 NSTM 300, 300-2.7

ELECTRICAL SAFETY, EQUIPMENT SAFETY CHECKS

ELECTRICAL SAFETY CHECKS WERE NOT PERFORMED/HAD THE WRONG PERIODICITY/WERE OVERDUE IN THE FOLLOWING LOCATIONS:

NOTE: ALL ELECTRICAL AND ELECTRONIC EQUIPMENT SHALL BE SAFETY CHECKED IN ACCORDANCE WITH THE CURRENT PMS. PORTABLE AND MOBILE EQUIPMENT REQUIRES A QUARTERLY SAFETY CHECK.

NOTE: THE FOLLOWING PERSONAL ITEMS ARE PROHIBITED FROM SHIPBOARD USE: FANS, PORTABLE EXTENSION CORDS, HIGH-INTENSITY LAMPS, READING LAMPS, ELECTRIC BLANKETS, HEATING PADS, TOOLS EXCEPT HOBBY TOOLS, HEAT/SUN LAMPS, HOT PLATES AND GRIDDLES, ELECTRIC CLOCKS, MICROWAVE OVENS, PORTABLE EXTENSION LIGHTS, ELECTRIC HEATERS, PORTABLE REFRIGERATORS AND AIR CONDITIONERS, AND IMMERSION-TYPE WATER HEATERS.

OPNAVINST 5100.19D, B0702E NSTM 300, SECTION 300-2.7 MIP 3000 SERIES

ELECTRICAL SAFETY, INDOC SAFETY TRAINING

ALL PERSONNEL, WHEN REPORTING ABOARD AND ANNUALLY THEREAFTER, DID NOT RECEIVE INDOCTRINATION TRAINING ON BASIC ELECTRICAL SAFETY, INCLUDING THE REQUIREMENTS REGARDING USE OF PERSONAL PROTECTIVE EQUIPMENT, AND RECOGNIZING SYMPTOMS OF ELECTRICAL SHOCK, ELECTRICAL SHOCK TRAUMA, AND EMERGENCY FIRST AID RESPONDER TECHNIQUES.

OPNAVINST 5100.19D, B0708, AND APPENDIX A5-A

ELECTRICAL SAFETY, PPE

ELECTRICAL SAFETY RUBBER GLOVES HAD THE FOLLOWING DEFICIENCIES:

- DETERIORATED.
- DAMAGED.
- NOT PMS'ED, POWDERED, AND PLACED IN ORIGINAL BOX/PROTECTED FROM DAMAGE DURING STORAGE.
 - IMPROPERLY USED FOR CHEMICAL HANDLING OR CLEANING.
- LEATHER OVER-GLOVES WERE NOT AVAILABLE TO PROTECT RUBBER GLOVES FROM DAMAGE DURING USE.
- SAFETY GOGGLES AND FACE SHIELDS WERE NOT AVAILABLE FOR ISSUE/WERE IN POOR CONDITION/WERE DIRTY/WERE THE INCORRECT TYPE FOR THE HAZARD.

OPNAVINST 5100.19D, B0706, C0903, B1203C(7) NSTM 300-2.5.3

ELECTRICAL SAFETY, SAFETY OFFICER TRAINING

THE SAFETY OFFICER HAD NOT COMPLETED WATCHSTATION 304 OF THE SAFETY PROGRAMS AFLOAT PQS (NAVEDTRA 43460-4A) WITHIN 16 WEEKS OF ASSIGNMENT.

OPNAVINST 5100.19D B0708D

ELECTRICAL SAFETY, TOOL ISSUE PQS TRAINING

PERSONNEL WHO RUN THE PORTABLE TOOL ISSUE ROOM HAD NOT COMPLETED THE ELECTRICAL TOOL ISSUE ROOM WATCHSTATION 302 IN THE SAFETY PROGRAMS AFLOAT PQS (NAVEDTRA 43460-4B).

OPNAVINST 5100.19D B0708C

ELECTRICAL SAFETY, TOOL ISSUE

- THE SHIP DID NOT HAVE A CENTRALIZED PORTABLE TOOL ISSUE.
- VISUAL AND QUARTERLY ELECTRICAL SAFETY INSPECTIONS ON PORTABLE TOOLS WERE NOT CONDUCTED.
- UNSAFE ELECTRIC TOOLS WERE NOT MARKED "OOC", RENDERED UNABLE TO BE USED, AND KEPT IN LOCKED STORAGE SEPARATE FROM OTHER TOOLS.

OPNAVINST 5100.19D, ARTICLE B0707 NSTM 300, 300-2.7

ELECTRICAL SAFETY, WORKBENCH HAZARD POSTING

- A CPR PLACARD (NSN 0177-LF-008-1700) AND AN ELECTRICAL SHOCK WARNING SIGN (NSN 0177-LF-008-1200) WERE NOT POSTED ADJACENT TO THE ELECTRONIC/ELECTRICAL WORKBENCH IN THE FOLLOWING LOCATION:
- THE WORKBENCH PLACARD "DANGER ELECTRICAL SHOCK HAZARD DO NOT TOUCH ENERGIZED CIRCUITS. THIS IS AN ELECTRICALLY SAFE WORKBENCH" WAS INCORRECTLY POSTED AT AN UNSAFE WORKBENCH IN THE FOLLOWING LOCATION:
- THE WORKBENCH PLACARD "DANGER WORKING ON ENERGIZED ELECTRICAL EQUIPMENT IS PROHIBITED ON THIS WORKBENCH. THIS IS NOT AN ELECTRICALLY SAFE WORKBENCH" WAS NOT POSTED AT THE UNSAFE WORKBENCH IN THE FOLLOWING LOCATION:
- A PLACARD WARNING TO DEENERGIZE POWER PRIOR TO TOUCHING SHOCK VICTIMS WAS NOT POSTED AT THE FOLLOWING LOCATION:

- A PLACARD INSTRUCTING PERSONNEL ON THE REMOVAL OF ELECTRICAL SHOCK VICTIMS FROM LIVE CIRCUITS WAS NOT POSTED AT THE FOLLOWING LOCATION:
- EMERGENCY WORKBENCH DISCONNECT SWITCHES WERE NOT LABELED AT THE FOLLOWING LOCATIONS:

NSTM 300, APPENDIX H, 300-H.5

GAS FREE ENGINEERING INSPECTION ITEMS:

GAS FREE ENG, CPR/RESCUE TRAINING

ALL GFE PERSONNEL WERE NOT TRAINED IN EMERGENCY RESCUE AND GFE PROCEDURES AND IN CPR, WITH CPR REFRESHER PERIODICITY IN ACCORDANCE WITH AMERICAN HEART OR RED CROSS ASSOCIATION REQUIREMENTS.

OPNAVINST 5100.19D, B0803F NSTM 074(V3), 074-18.8 AND 25.7

GAS FREE ENG, CREW TRAINING

ALL HANDS DID NOT RECEIVE GAS FREE ENGINEERING PROGRAM FAMILIARIZATION UPON REPORTING ABOARD AND PRIOR TO AVAILABILITY, WITH TRAINING RECORDS MAINTAINED BY THE DIVISION OFFICER.

OPNAVINST 5100.19D, B0803 NTSM 074(V3), 074-18.9 NAVOP 006/99

GAS FREE ENG, GAS FREE LOG

THE GAS FREE ENGINEERING CERTIFICATION AND TEST LOG HAD THE FOLLOWING DEFICIENCIES:

- CERTIFICATES WERE NOT MAINTAINED AS A LEGAL DOCUMENT FOR 12 MONTHS.
- CERTIFICATES WERE NOT PROPERLY COMPLETED.
- CERTIFICATES WERE NOT EXTENDED OR RETESTS DOCUMENTED AS REQUIRED.
- LACKED REQUIRED SIGNATURES.
- DID NOT LIST DATE AND TIME OF INSPECTION/TEST.
- DID NOT INDICATE LOCATION OF SPACE.
- HOT WORK FIREWATCH DID NOT INDICATE SPACE WAS CLEARED.
- ALL CERTIFICATES WERE NOT CLOSED OUT AFTER A MAXIMUM OF 24 HOURS AND A NEW CERTIFICATE ISSUED WITH A NEW SERIAL NUMBER TO CONTINUE OPERATIONS.

OPNAVINST 5100.19D, B0803 NSTM 074, 074-19.23

CACEDEE ENG. OFF DEDCONNEL TRAINING

GAS FREE ENG, GFE PERSONNEL TRAINING

THE GFE AND GFEA:

- HAD NOT COMPLETED GFE AND GFEPO FOR SURFACE (AFLOAT) OPERATIONS, K-495-0051.
- HAD NOT COMPLETED 40 HOURS OF PRACTICAL OJT UNDER THE SUPERVISION OF AN OFFICIAL GFE (GFE ONLY, ANY WAIVER IN WRITING BY THE CO).
 - HAD NOT BEEN CERTIFIED IN WRITING BY THE SHIP'S CO.

THE GFPO(S):

- HAD NOT COMPLETED GFE AND GFEPO FOR SURFACE (AFLOAT) OPERATIONS, K-495-0051.
- HAD NOT COMPLETED DAMAGE CONTROL PQS, NAVEDTRA 43119-4(SERIES), GFE WATCHSTATION.
- HAD NOT BEEN GIVEN WRITTEN AUTHORIZATION TO PERFORM GFE DUTIES BY THE SHIP'S CO.

OPNAVINST 5100.19D, B0801B NSTM 074(V3), 074-18.8

GAS FREE ENG, PROGRAM EVALUATION

THE GFE DID NOT EVALUATE THE GAS FREE ENGINEERING PROGRAM, AT LEAST ANNUALLY. THE EVALUATION DID NOT INCLUDE RECERTIFICATION OF ALL GFE PERSONNEL.

THE SAFETY OFFICER AND GFE DID NOT MAINTAIN A COPY OF THE ANNUAL GFE PROGRAM **EVALUATION.**

OPNAVINST 5100.19D B0804 NSTM 074, 074-18.10

GAS FREE ENG, TEST EQUIPMENT

- THE GFE DID NOT HAVE A FOUR GAS ANALYZER ONBOARD/WAS INOP.
- THE FOUR GAS ANALYZER CALIBRATION KIT WAS NOT ONBOARD/ EXPIRED.
- THE FOUR GAS ANALYZER WAS NOT CALIBRATED USING THE CALIBRATION KIT PRIOR TO EACH USE.
 - _ CHEMICAL DETECTION TUBES INSPECTED WERE EXPIRED.
- ____ OF __ ___ OF _ CHEMICAL DETECTION TUBE PISTON PUMPS/BELLOWS WERE MISSING/DETERIORATED/DAMAGED.

OPNAVINST 5100.19D, B0803E NSTM 074(V3), APPENDIX K AND L

HAZMAT & HAZMINCEN INSPECTION ITEMS:

HAZMAT, BROMINE CARTRIDGE STOWAGE

- BROMINE CARTRIDGES WERE NOT STORED IN A COOL, DRY, VENTILATED SPACE.
- BROMINE CARTRIDGE WERE DAMAGED, DETERIORATED, OR LEAKING RESIN.
- A BROMINE STOWAGE CABINET WAS NOT PROVIDED.
- BROMINE CARTRIDGES HAS EXPIRED.
- LOCKER HAD BROMINE CARTRIDGES STOWED WITHOUT THE REQUIRED WARNING PLACARD.

GSO 532C NAVMED P-5010-6-21.1(5) NSTM 533-3.4.4 SHIP SPECS 532 NSTM 533-3.4.5 NSTM 533-3.5.1.2.5 NSTM 533-3.5.1.1.3.1

HAZMAT. CORROSIVES CABINET

CORROSIVES LOCKER WAS IN DETERIORATED MATERIAL CONDITION AS FOLLOWS:

- DAMAGED DOOR.
- SPILLAGE IN LOCKER.
- CORRODED.
- NOT PROPERLY LABELED FOR HAZARDOUS MATERIALS.
- SHELVES WERE NOT LINED WITH CORROSION-RESISTANT MATERIAL.
- BOTTLES OR CARBOYS WERE NOT CUSHIONED OR RETAINED IN ORIGINAL PACKAGING FOR SAFETY.
 - MATERIALS WERE NOT PROPERLY LABELED.
 - STRONG ACIDS AND BASES WERE STORED TOGETHER (INCOMPATIBLE).

OPNAVINST 5100.19D, ARTICLE C2304 AND C2308 NSTM 670, 670-6.3.1

HAZMAT, CALCIUM HYPOCHLORITE

CALCIUM HYPOCHLORITE HANDLING/USAGE/STORAGE HAD THE FOLLOWING DEFICIENCIES:

- READY USAGE STOCKS WERE NOT STOWED IN A LOCKED BOX THAT WAS BULKHEAD MOUNTED IN THE COGNIZANT OFFICE SPACE.
- THREE 1/4 INCH VENT HOLES WERE NOT DRILLED IN THE BOTTOM OF THE STORAGE BOX TO ALLOW RELEASE OF ANY CHLORINE PRODUCTS.
 - READY USAGE SUPPLY WAS NOT LIMITED TO A MAXIMUM OF 3 DAYS USAGE.
- ALL LOCKERS, BINS AND ENCLOSURES WERE NOT LABELED WITH RED LETTERS ON A WHITE BACKGROUND (HAZARDOUS MATERIAL CALCIUM HYPOCHLORITE).
- STORAGE OF CALCIUM HYPOCHLORITE WAS NOT PROHIBITED IN MACHINERY SPACES, FLAMMABLE LIQUIDS STOREROOM, BERTHING SPACES, STOREROOMS, OR IN THE OIL AND WATER TEST LABORATORY AREAS.
 - STOREROOM STOCKS WERE NOT STOWED IN LABELED VENTILATED LOCKERS OR BINS.
- LOCKERS OR BINS FOR STOREROOM STOCKS WERE NOT LOCATED IN AN AREA WHERE THE MAXIMUM TEMPERATURE WOULD NOT EXCEED 100 DEGREES F UNDER NORMAL OPERATING CONDITIONS AND WHERE WATER CONDENSATION COULD NOT ACCUMULATE.
- LOCKERS OR BINS FOR STOREROOM STOCKS WERE NOT SEPARATED BY AT LEAST 5 FEET FROM ANY POINT, HEAT SOURCE, OR SURFACE WHICH MAY EXCEED 140 DEGREES F AND/OR WERE ADJACENT TO A MAGAZINE.

- STORAGE OF PAINTS, OILS, GREASES OR COMBUSTIBLE ORGANIC MATERIALS WAS NOT PROHIBITED IN THE AREA OF LOCKERS OR BINS USED FOR STOREROOM STOCKS.
- STOREROOM STOCK QUANTITIES WERE NOT LIMITED TO NO MORE THAN 48 6-OUNCE BOTTLES OR 36 3-3/4 POUND BOTTLES IN ANY INDIVIDUAL LOCKER OR BIN.
 - CONDITION OF THE CABINET WAS SEVERELY DETERIORATED.

OPNAVINST 5100.19D, C2309C

HAZMAT, COMPRESSED GAS CYLINDERS

- EACH CYLINDER WAS IMPROPERLY SECURED WITH A NYLON STRAP OR LINE VICE A METAL COLLAR OR KEVLAR STRAP. (KEVLAR STRAPS HAVE SEWN VICE MELTED ENDS, MAY BE LABELED AS KEVLAR, AND ARE OFTEN YELLOW OR LIGHT BROWN IN COLOR).
- EACH CYLINDER WAS NOT SECURED WITH HORIZONTAL AND VERTICAL RESTRAINTS THAT MEET CLASS B SHOCK REQUIREMENTS.
 - CYLINDERS WERE NOT INDIVIDUALLY SECURED.
- CYLINDERS WERE NOT PROTECTED FROM THE SUN AND WEATHER ON THE WEATHER DECKS.
 - FLAMMABLE GAS CYLINDERS WERE NOT SEGREGATED FROM OXYGEN CYLINDERS.
 - EMPTY CYLINDERS WERE NOT MARKED "MT".
 - CYLINDERS WERE DAMAGED.
 - CYLINDERS WERE DETERIORATED.
 - CYLINDERS WERE NOT COLOR CODED AS TO CONTENTS.
 - CYLINDERS WERE MISSING CAPS.

OPNAVINST 5100.19D, C2311 NAVSEA STD DRAWING NUMBER 803-5184287

HAZMAT, HAZMAT COORDINATOR TRAINING

HAZMAT COORDINATOR WAS NOT A GRADUATE OF THE AFLOAT HAZMAT COORDINATOR COURSE OR THE OTHER COURSE SPECIFIED IN OPNAVINST 5100.19D, B0302E.

OPNAVINST 5100.19D, B0302E(1)

HAZMAT. HAZMAT COORDINATOR

COMMISSIONED OFFICER FROM THE SUPPLY DEPARTMENT WAS NOT APPOINTED IN WRITING BY THE COMMANDING OFFICER AS HAZARDOUS MATERIAL COORDINATOR.

(SHIPS SMALLER THAN A FRIGATE) COMMISSIONED OFFICER WAS NOT APPOINTED IN WRITING BY THE COMMANDING OFFICER AS HAZARDOUS MATERIAL COORDINATOR.

(IF DESIGNATED BY THE TYCOM WHERE THE NUMBER OF COMMISSIONED OFFICERS IS LIMITED OR THE APPOINTMENT WOULD POSE AN EXCESSIVE BURDEN ON THE SHIP) A CHIEF OR LEADING PETTY OFFICER WAS NOT APPOINTED AS HM COORDINATOR.

OPNAVINST 5100.19D, B0302A(1)(B)

HAZMAT, HAZMAT SPILL KIT

DCA DID NOT MAINTAIN THE HAZMAT SPILL RESPONSE KIT(S) (AEL 2-550024007), ISSUED AS ONE KIT PER EVERY TWO REPAIR LOCKERS PER SHIP.

THE HAZMAT SPILL RESPONSE KIT(S) WERE MISSING THE FOLLOWING INVENTORY ITEMS:

- SARANEX COATED COVERALLS (6 LG, 6 MED).
- TYVEK/SARANEX APRON (LG, 10 EA).

- SORBENT PILLOWS (20 EA).
- SORBENT SOCKS (6 EA).
- SQUEEGE, 12 INCH BLADE (1 EA).
- SCRUB BRUSH (1 EA).
- RUBBER DUST PAN (1 EA).
- PLASTIC BAGS (BX 12).
- HGX (1 CAN).
- RUBBER GLOVES (SIZE 10, 3 PR).
- SHIPPING DRUM 30 GAL STEEL (1 EACH).
- GLOVES, TOXICOLOGICAL (LG, 3 PR).
- GLOVES, SURGICAL (12 PR).
- GOGGLES, CHEMICAL (6 PR).
- HAZMAT SPILL HANDBOOK (1 EA).
- SQUEEGE HANDLE (1 EA).
- HAZ WASTE LABELS (PKG OF 50).
- PCB LABELS (PKG OF 25).
- LITMUS PAPER, BLUE (1 TUBE).
- SEALING TAPE (1 ROLL).
- TONGS (1 EA).

OPNAVINST 5100.19D, B0302A(5)(D) AEL 2-550024007

HAZMAT, HM SUPERVISOR TRAINING

THE HM SUPERVISOR WAS NOT A GRADUATE OF THE HMC&M TECHNICIAN (SNEC 9595) COURSE (A-322-2600).

HAZMINCEN (IF ESTABLISHED) HM SUPERVISOR WAS NOT A GRADUATE OF THE CHRIMP/HICS TECHNICIAN COURSE.

OPNAVINST 5100.19D, B0302E

HAZMAT, IN-USE FLAMMABLE LKR, COMMERCIAL

THE COMMERCIAL IN-USE FLAMMABLE LIQUID LOCKER HAD THE FOLLOWING DEFICIENCIES:

- SELF-CLOSING DEVICE WAS BROKEN/INOP.
- SELF-LATCHING DEVICE WAS BROKEN/INOP.
- WAS IN DETERIORATED MATERIAL CONDITION.
- SPILLAGE ON SHELVES.
- QUANTITIES IN EXCESS OF 7-DAY WORKING STOCK/IN EXCESS OF 30 GALLONS PER SPACE.
- DOOR GASKET WAS MISSING/DAMAGED.
- DOOR WAS SPRUNG, FAILED TO SEAL.
- WAS NOT MARKED "FLAMMABLE" OR "FLAMMABLE MATERIALS", AND "WARNING, NO SMOKING, NO OPEN FLAMES" (COMMERCIAL OR STENCILED SIGNS).
- WAS NOT MARKED TO HAVE ITEMS REMOVED AND PLACED IN A FLAMMABLE LIQUID STOREROOM IN CASE OF STRIP SHIP CONDITIONS.
- DID NOT HAVE A CURRENT INVENTORY OF THE CONTENTS POSTED ON THE DOOR OF THE LOCKER, PER MRC 6641-Q36R.
 - WAS NOT AN APPROVED NAVSEA-MODEL FOR SHIPBOARD USE:

PER NSTM 670, APPROVED MODELS ARE:

JUSTRITE MODELS 25042, 4-GAL & 25712 12-GAL.

PROTECTOSEAL MODELS 5516S 5-GAL & 5517S 12-GAL.

DELTA MODELS CSL10 10-GAL & CSL15 - 15-GAL.

PARTS FOR JUSTRITE BRAND LOCKERS - 1-800-798-9250, E-MAIL JRMFG@MCS.NET..

PARTS FOR PROTECTOSEAL BRAND LOCKERS - (630) 595-0800, OR E-MAIL INFO@PROTECTOSEAL.COM.

PARTS FOR DELTA BRAND LOCKERS - (208) 529-8545, E-MAIL DELTA@DIRECTINTER.NET.

OPNAVINST 5100.19D C2304B MRC 6641-Q36R

HAZMAT, IN-USE FLAMMABLE LKR, NAVSEA DESIGN

THE NAVSEA-DESIGNED, IN-USE FLAMMABLE LIQUID LOCKER HAD THE FOLLOWING DEFICIENCIES:

- SELF-CLOSING DEVICE WAS BROKEN/INOP.
- SELF-LATCHING DEVICE WAS BROKEN/INOP.
- WAS IN DETERIORATED MATERIAL CONDITION.
- SPILLAGE ON SHELVES.
- QUANTITIES IN EXCESS OF 7-DAY WORKING STOCK/IN EXCESS OF 30 GALLONS PER SPACE.
- DOOR GASKET WAS MISSING/DAMAGED.
- DOOR WAS SPRUNG, FAILED TO SEAL.
- BARREL LATCH WAS DAMAGED.
- WERE NOT MARKED "FLAMMABLE" OR "FLAMMABLE MATERIALS", AND "WARNING, NO SMOKING, NO OPEN FLAMES" (COMMERCIAL OR STENCILED SIGNS).
- WERE NOT MARKED TO HAVE ITEMS REMOVED AND PLACED IN A FLAMMABLE LIQUID STOREROOM IN CASE OF STRIP SHIP CONDITIONS.
- DID NOT HAVE A CURRENT INVENTORY OF THE CONTENTS POSTED ON THE DOOR OF THE LOCKER, PER MRC 6641-Q36R.

NAVSEA LOCKER PARTS AVAILABLE FROM DELTA INDUSTRIES, (208) 529-8545, E-MAIL DELTA@DIRECTINTER.NET. SEE CSL OR FSL MODEL NUMBER ON INNER DOOR.

DOOR HANDLE KIT - CSL-16-RPK \$46.00 (ROUND HOLE).

DOOR HANDLE KIT - FSL-15-RPK \$104.00 (SQUARE HOLE).

DOOR GASKET KIT - FSL/CSL-29-CTL \$15.00.

DOOR CLOSURE KIT - FSL/CSL-18-RPL \$75.00.

FLAMMABLE DECAL \$11.00.

OPNAVINST 5100.19D, ARTICLE C2304B MRC 6641-Q36R

HAZMAT, LABELING OF CONTAINERS

CONTAINERS INTO WHICH HAZARDOUS MATERIALS WERE TRANSFERRED:

- WERE NOT PROPERLY MARKED/LABELED.
- WERE MISSING LABELS/LABELS WERE DETERIORATED.
- USED AND EXCESS HAZMAT WAS NOT PROPERLY LABELED.
- TANKS AND BULK CONTAINERS WERE NOT LABELED.

OPNAVINST 5100.19D, C2302E DD FORM 2521 AND 2522 LABELS

HAZMAT, LITHIUM BATTERY STORAGE

LITHIUM BATTERY STORAGE HAD THE FOLLOWING DEFICIENCIES:

- NOT IN COOL, SPRINKLER PROTECTED STORAGE.
- NOT IN THEIR ORIGINAL SHIPPING CONTAINERS.
- NOT SEGREGATED FROM AND ISOLATED FROM COMBUSTIBLES AND OTHER HAZARDOUS MATERIALS.

- NOT STOWED IN A DRIP-PROOF, SELF-DRAINING, VENTILATED LOCKER ON THE WEATHER DECK, CAPABLE OF MAINTAINING A STORAGE TEMPERATURE BELOW 130 DEGREES F.
 - STOWAGE AREA NOT LABELED FOR LITHIUM BATTERY STOWAGE.

OPNAVINST 5100.19D, C0904S NAVSEA S9310-AQ-SAF-010

HAZMAT, MATERIAL SAFETY DATA SHEETS

HAZMAT COORDINATOR/MDR:

- DID NOT MAINTAIN THE HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS) HMC&M CD-ROM.
 - DID NOT MAINTAIN HARD COPY MSDS FOR HAZMAT NOT COVERED BY HMIS.
- DID NOT HAVE MSDS'S FOR OPEN PURCHASE ITEMS ON BOARD OR AVAILABLE UPON REQUEST.

OPNAVINST 5100.19D, B0302D(1)

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HAZMAT, MERCURY STORAGE

SMALL QUANTITIES OF MERCURY/MERCURY-BEARING COMPONENTS:

- WERE NOT STORED IN NAVSEA MERCURY STORAGE LOCKER, DRAWING NUMBER 803-5184175.
- WERE NOT SECURED TO AVOID ACCIDENTAL BREAKAGE, IN ORIGINAL CONTAINERS, IN A COOL. DRY LOCATION.
 - WERE NOT IN A DRAWER OR LOCKER LABELED FOR HAZARDOUS MATERIAL STORAGE.

OPNAVINST 5100.19D, C2307F

HAZMAT, OPEN PURCHASE

OPEN PURCHASE OF HAZMAT WAS NOT RESTRICTED TO ONLY THOSE ITEMS FOR WHICH STOCK NUMBER PRODUCT COULD BE DETERMINED TO BE INFERIOR, DUE TO URGENCY, OR MATERIAL COULD NOT BE SATISFIED FROM STOCK.

OPEN PURCHASE OF HAZMAT WAS NOT SIGNED AND AUTHORIZED BY AN OFFICER O-5 OR ABOVE.

OPNAVINST 5100.19D, B0302A(6)(B) AND (C), C2302C

HAZMAT, SPILL CONTINGENCY PLAN

SHIP DID NOT IMPLEMENT A HAZARDOUS MATERIAL SPILL CONTINGENCY PLAN WITH PROCEDURES TO RESPOND TO POSSIBLE ON BOARD HM SPILLS. (SHIP'S INST NOT REQUIRED, BUT MUST HAVE/KNOW ABOUT APPENDIX B3-A AND B3-B).

OPNAVINST 5100.19D, B0302A(5)(A), APPENDIX B3-A

HAZMAT, SPILL TRAINING

DCA DID NOT TRAIN THE SHIP'S DAMAGE CONTROL TEAM/FIRE DEPARTMENT IN RESPONDING TO SPILLS OF HAZMAT.

NOTE: ACTUAL DRILLS ARE NOW REQUIRED ONLY AS OFTEN AS THE DCA FEELS IS NECESSARY. OVER-THE-SIDE OIL SPILL DRILLS ARE COVERED BY OPNAVINST 5090.1B AND ARE REQUIRED ANNUALLY.

HAZMAT, STOWAGE

- MORE THAN A 7-DAY'S SUPPLY OF ROUTINELY USED HAZMAT WAS STORED IN OR NEAR THE USER COMPARTMENT.

- INCOMPATIBLE MATERIAL (SPECIFY) WAS STORED IN PROXIMITY.
- HAZMAT STORAGE AREA (SPECIFY) HAD LEAKING CONTAINERS.
- HAZMAT CONTAINERS WERE NOT SECURE FOR SEA AND SUBJECT TO SPILLAGE.
- HAZMAT STORAGE AREA LACKED REQUIRED FIRE SUPPRESSION PROTECTION.
- HAZMAT STOWAGE AREA WAS NOT CORRECT FOR TYPE THE OF MATERIAL (SPECIFY).

(NOTE IF THE STOWAGE APPLIES TO AEROSOLS, FLAMMABLES, OXIDIZERS, CORROSIVES).

OPNAVINST 5100.19D, C2304:

HAZMAT, USED/EXCESS HAZMAT DISPOSAL

- RAGS, CONTAINERS, OR OTHER RESIDUAL MATERIALS CONTAMINATED WITH HAZ MAT WERE NOT PROCESSED ABOARD (IF CAPABLE) OR CONTAINERIZED FOR SHORE PROCESSING OR DISPOSAL.
 - USED HM WAS NOT SEGREGATED FOR COLLECTION.
- USED HM WAS NOT LABELED AS TO CONTENTS OR HAD A LABEL STATING THAT THE CONTENTS WERE UNKNOWN.
 - MATERIALS WERE NOT SEGREGATED FROM INCOMPATIBLES.
 - CONTAINERS WERE NOT PROPERLY STORED AWAITING OFF-LOAD.
 - HAZMAT WAS NOT COLLECTED IN ORIGINAL CONTAINERS. IF POSSIBLE.
 - HAZMAT WAS NOT REVIEWED FOR EXTENSION OF SHELF-LIFE AND REUSE.

OPNAVINST 5100.19D, C2302G

HAZMAT, WARNINGS AND PRECAUTIONS

HM STOWAGE LOCATIONS WERE NOT POSTED:

- WITH A CAUTION SIGN THAT STATES: HAZARDOUS MATERIAL STOWAGE AREA, IN THE FOLLOWING LOCATIONS:
 - WITH NO SMOKING SIGNS IN THE FOLLOWING FLAMMABLE MATERIAL STORAGE LOCATIONS:

OPNAVINST 5100.19D, C2304C, C2305H

HAZMAT, WORKCENTER TRAINING

WORKCENTER SUPERVISORS DID NOT ENSURE THAT, PRIOR TO INITIAL USE OR HANDLING OF ANY HAZMAT, WORKCENTER PERSONNEL HAD BEEN TRAINED ON THE HAZARDS ASSOCIATED WITH THAT MATERIAL, AND WERE FAMILIAR WITH WHAT AN MSDS IS, WHAT IT CONTAINS, AND WHERE A COPY CAN BE FOUND.

OPNAVINST 5100.19D, B0302A(10), A0503F

HAZMINCEN, 24-HOUR SERVICE

HAZMINCEN DID NOT PROVIDE 24 HOURS OF SERVICE TO WORKCENTER CUSTOMERS.

HAZMINCEN. FACILITY

TO ISSUE VARIOUS TYPES OF COMMON-USE HAZMAT USED ABOARD SHIP, THE HAZMINCEN FACILITY WAS NOT EQUIPPED WITH:

- PERSONAL PROTECTIVE EQUIPMENT.
- VENTILATION.
- FIRE AND SPILL PROTECTION.
- SHELVING.
- CONTAINMENT TO SAFELY STORE, SEGREGATE, AND ISSUE.
- COMPUTER AND PERIPHERALS TO RUN THE HICSWIN SOFTWARE.

THE SHIP DID NOT HAVE A HAZMINCEN FACILITY (REQUIRED FOR SHIPS LARGER THAN A FRIGATE).

OPNAVINST 5100.19D, C2303C DDG-51 CLASS SHIPALT 51-00288K, ECP 51-1383, AWI-1180, DP-2176, OR FMR 3415.

HAZMINCEN, FUNCTION

HAZMINCEN WAS NOT FUNCTIONAL.

HAZMINCEN WAS DEFICIENT IN THE FOLLOWING FUNCTIONS:

- HAZMAT WAS NOT STORED IN CONTAINERS OR COMPARTMENTS RESERVED AND CONFIGURED EXCLUSIVELY FOR HAZMAT.
- BULK AND INFREQUENTLY USED HAZMAT WAS NOT STORED IN COMPLIANT STORAGE SPACES AND ONLY MOVED TO THE HAZMINCEN WHEN NECESSARY FOR REPLENISHMENT AND USE.
 - HAZMAT WAS NOT AVAILABLE TO WORKCENTERS 24 HOURS PER DAY.
- HAZMAT WAS NOT RECORDED AND CONTROLLED USING THE NAVY-DEVELOPED HICSWIN SOFTWARE IN A MANNER THAT PERMITS AUDITING OF THE STORE INVENTORY AND THE USER.
- AMOUNT OF COMMON-USE HAZMAT WAS NOT RESTRICTED TO THE MINIMUM LEVEL NECESSARY FOR WORK IN SHIP WORKCENTERS. (WORKCENTERS MAYBE ALLOWED TO RETAIN A 7-DAY QUANTITY OF HM USED DAILY IN SUITABLE LOCKERS OR CABINETS).
- OPTIMAL PROCEDURES AND FACILITIES WERE NOT PROVIDED FOR THE TURN-IN OF USED HAZMAT, EMPTY HAZMAT CONTAINERS, AND HAZMAT-CONTAMINATED ITEMS.
- PREVIOUSLY ISSUED UNUSED HAZMAT WERE NOT CONSOLIDATED FOR EITHER REUSE OR CATEGORIZED FOR ALTERNATE USE.
 - HAZMAT WAS NOT PROPERLY PROCESSED FOR SAFE OFFLOAD/DISPOSAL ASHORE.
- PROCUREMENT AND RECEIPT OF HAZMAT AUTHORIZED ABOARD WAS NOT COORDINATED WITH THE HAZMINCEN.
 - SATELLITE LOCATIONS NOT MONITORED FOR COMPLIANCE.
- _____ TYPE-SHML (T-SHML) NOT UPDATED FROM SALTS MONTHLY AS THE SHIP AUTHORIZED USER LIST (AUL).

OPNAVINST 5100.19D), C2303B ANF	C2302.B.(5)(2	<u>′</u> .).	

HAZMINCEN, ISSUED MATERIAL CONTROL

THE REMAINING HAZMAT, ITS EMPTY CONTAINER, AND ANY RESIDUE FROM THE MAINTENANCE ACTION WAS NOT RETURNED TO THE HAZMINCEN AT THE COMPLETION OF A MAINTENANCE ACTION, THE END OF THE WORK DAY, OR THE END OF THE 7-DAY USE PERIOD.

THE RETURN WAS NOT ENTERED INTO HICSWIN.

HAZMINCEN OPERATORS DID NOT USE HICSWIN TO PRINT OUT A REPORT OF THE WORKCENTERS DELINQUENT IN RETURNING UNUSED HAZMAT OR EMPTY CONTAINERS AND VIGOROUSLY SEEK OUT THE MATERIAL NOT RETURNED.

OPNAVINST 5100.19D, C2303E(2)(D)

HAZMINCEN, LABELING ISSUED CONTAINERS

HAZMINCEN SUPERVISOR DID NOT ENSURE THAT WHEN HAZMAT WAS TRANSFERRED INTO OTHER CONTAINERS PRIOR TO ISSUE THE NEW CONTAINERS WERE PROPERLY MARKED.

OPNAVINST 5100.19D, C2302E

HAZMINCEN, MSDS AVAILABILITY

EVERY ITEM OF HAZMAT IN THE HAZMINCEN DID NOT HAVE AN MSDS (HMIS OR HARD COPY FOR OPEN PURCHASED ITEMS)/MSDS'S WERE NOT READILY AVAILABLE/PROVIDED TO PERSONNEL ISSUED MATERIAL.

OPNAVINST 5100.19D, B0302A(6), C2302C(1)

HEARING CONSERVATION INSPECTION ITEMS:

HEARING CONSERVATION, AUDIOGRAMS

ALL PERSONNEL ASSIGNED TO DUTIES IN DESIGNATED NOISE HAZARDOUS AREAS OR OPERATING NOISE HAZARDOUS EQUIPMENT HAD NOT BEEN INCLUDED IN THE HEARING CONSERVATION PROGRAM.

ALL PERSONNEL ASSIGNED TO DUTIES IN DESIGNATED NOISE HAZARDOUS AREAS OR OPERATING NOISE HAZARDOUS EQUIPMENT HAD NOT RECEIVED AN ANNUAL AUDIOGRAM.

MEDICAL RECORD REVIEW OF ___ PERSONS WHO WERE UNDER MEDICAL SURVEILLANCE FOR HEARING CONSERVATION INDICATED ___ DID NOT HAVE CURRENT BASELINES, ANNUAL AUDIOMETRIC EXAMINATIONS, OR FOLLOW-UP EXAMINATIONS.

OPNAVINST 5100.19D, B0407B, APPENDIX B4-A PARA 5(C)

HEARING CONSERVATION, NOISE HAZARD LABELING

NAVMED 6260/2 WAS NOT USED FOR POSTING/LABELING NOISE HAZARDOUS AREAS, OR AREAS WERE NOT POSTED AS REQUIRED AT ENTRANCES.

EQUIPMENT/TOOLS DESIGNATED AS NOISE HAZARDOUS WERE NOT PROPERLY LABELED WITH NAVMED 6260/2A.

OPNAVINST 5100.19D, B0404C SHIP SPEC 073 (APPLICABLE TO NEW CONSTRUCTION ONLY)

HEARING CONSERVATION, NOISE SURVEYS

NOISE SURVEYS WERE NOT CONDUCTED AS PART OF THE BASELINE OR ANY FOLLOW-UP INDUSTRIAL HYGIENE SURVEYS.

THE SAFETY OFFICER DID NOT MAINTAIN A COPY OF THE CURRENT NOISE SURVEY.

OPNAVINST 5100.19D, B0404A, B0402B(2), B0409

HEARING CONSERVATION, THRESHOLD SHIFTS

- FOLLOW-UP EXAMINATIONS OF PERSONNEL WITH THRESHOLD SHIFTS WERE NOT CONDUCTED.
- ALL PERMANENT THRESHOLD SHIFTS REPORTED BY MEDICAL DEPARTMENT HAD NOT BEEN LOGGED AND REVIEWED BY THE SAFETY OFFICER. THE LOG ENTRY MUST INCLUDE NAME, RATE OR RANK, WORKCENTER, AND TIME ONBOARD.

OPNAVINST 5100.19D, B0402E(8), APPENDIX B4-A

HEARING CONSERVATION, PPE

- ____ OF ___ CIRCUMAURAL EAR MUFFS EXAMINED WERE IN DETERIORATED CONDITION/HAD MISSING PARTS/REQUIRED MAINTENANCE.

- FITTED HEARING PROTECTION WAS NOT AVAILABLE FROM THE MDR.
- HEARING PROTECTIVE DEVICES (PLUGS OR MUFFS) WERE NOT AVAILABLE TO PERSONNEL WORKING IN NOISE HAZARDOUS AREAS.

- HEARING PROTECTION WAS NOT BEING WORN AS REQUIRED/WAS NOT BEING ENFORCED (CITE LOCATION).

	OPNAVIN	1ST	5100.	.19D.	B0406
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HEARING CONSERVATION, TRAINING

- PERSONNEL INCLUDED IN HEARING CONSERVATION DID NOT RECEIVE TRAINING RELATIVE TO HEARING CONSERVATION PRIOR TO WORKING IN NOISE HAZARDOUS AREAS OR WITH NOISE HAZARDOUS EQUIPMENT, AND ANNUALLY THEREAFTER.
- MDR DID NOT ENSURE THAT REFRESHER TRAINING WAS PERFORMED IN CONJUNCTION WITH THE ANNUAL AUDIOGRAM.

OPNAVINST 5100.19D, B0408, B0402E(3)

HEAT STRESS INSPECTION ITEMS:

HEAT STRESS, AHSS SENSORS

- AUTOMATED HEAT STRESS SYSTEM (AHSS) SENSORS WERE NOT MOUNTED WHERE WORKERS OR WATCHSTANDERS SPEND THE MAJORITY OF THEIR TIME.
 - AUTOMATED HEAT STRESS SENSORS WERE PLACED IN AIRFLOW EXCEEDING 600 FPM.
 - AUTOMATED HEAT STRESS SENSORS WERE NOT CALIBRATED (PMS).
 - AUTOMATED HEAT STRESS SENSORS HAD BEEN DAMAGED.
 - AUTOMATED HEAT STRESS SENSORS WERE NOT PROVIDING ACCURATE READINGS.

OPNAVINST 5100.19D, B0204B(2)

HEAT STRESS, ALL HANDS TRAINING

ALL HANDS HAD NOT RECEIVED HEAT STRESS TRAINING UPON REPORTING ABOARD.

OPNAVINST 5100.19D, B0206A

HEAT STRESS, DRY BULB READINGS

DRY BULB TEMPERATURES WERE NOT RECORDED, ON A PREPARED PAPER LOG FORM, IN POTENTIAL HEAT STRESS AREAS AS FOLLOWS:

- EVERY 4 HOURS FOR MANNED SPACES IF DRY BULB TEMPERATURE IS LESS THAN 85 DEGREES F.
- EVERY HOUR FOR MANNED SPACES IF DRY BULB TEMPERATURE IS GREATER THAN 85 DEGREES F.
- EVERY HOUR AT TEMPORARY INSTALLATIONS FOR REPAIRS OR MAINTENANCE CONDITIONS IF DRY BULB TEMPERATURE IS GREATER THAN 85 DEGREES F.
- TEMPERATURE LOGS WERE NOT MAINTAINED, WITH READINGS AT OR ABOVE THE TRIGGER TEMPERATURES CIRCLED IN RED.
- ON THE AUTOMATED HEAT STRESS SYSTEM (AHSS), TEMPERATURES WERE NOT RECORDED AND CHECKED/VERIFIED ONCE PER WATCH.

OPNAVINST 5100.19D, B0204B(3)(4), B0204C, B0204F

HEAT STRESS, HEAT/COLD INJURY REPORTS

HEAT STRESS INJURY REPORTS, NAVMED 6500-1, WERE NOT FILED/RETAINED/ENTERED IN THE MONTHLY MORBIDITY REPORT.

OPNAVINST 5100.19D, B0204F

HEAT STRESS, MONITORING THERMOMETERS

THERMOMETERS (NSN 9G-6685-00-243-9964 ALCOHOL IN GLASS):

- WERE MISSING (CITE LOCATIONS).
- NOT MOUNTED TO MINIMIZE HEATING OR COOLING EFFECTS FROM CONTACT WITH HOT OR COLD STRUCTURES (NO METAL TO METAL CONTACT).
 - WERE MOUNTED INCORRECTLY TO MONITOR WATCHSTANDER.
 - WERE NOT AT LEAST 2 FEET FROM THE SUPPLY VENTILATION TERMINAL/OPENING.
 - DID NOT HAVE THE ETCH MARK ALIGNED WITH 32 DEGREES F.
 - WAS DAMAGED.

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HEAT STRESS, PHYSICAL HAZARDS

THE FOLLOWING HEAT STRESS PHYSICAL HAZARDS WERE FOUND (CITE LOCATIONS):

- BARE, HOT METAL SURFACES.
- EXCESSIVE STACK GASES OR SMOKE IN SPACE.
- RADIANT SURFACES LACKED THERMAL INSULATION.
- EXCESSIVE STEAM LEAKS CONTRIBUTED TO HUMIDITY.

OPNAVINST 5100.19D, APPENDIX B2-B

HEAT STRESS, SUPPLY AIR SPOT COOLING

- SUPPLY AIR FROM SPOT COOLERS WAS INSUFFICIENT TO BENEFIT THE WATCHSTANDER IN THE FOLLOWING LOCATIONS:

- SUPPLY AIRFLOW WAS NOT DIRECTED AT THE WATCHSTANDER IN THE FOLLOWING LOCATIONS:

OPNAVINST 5100.19D, APPENDIX B2-B

HEAT STRESS, WBGT METER, MODEL RSS-220

THE FOLLOWING WGBT METER, MODEL RSS-220, DEFICIENCIES WERE NOTED:

- SHIP DID NOT HAVE AT LEAST 2 WBGT METERS ONBOARD.
- RADIANT BULB WAS DAMAGED.
- WICK WAS EXCESSIVELY DIRTY/MISSING/DAMAGED.
- METER WAS OUT OF CALIBRATION.
- METER WOULD NOT HOLD CHARGE.
- SPARE PARTS WERE NOT AVAILABLE.
- RADIANT BULB WAS MISSING.

ONE METER WAS NOT AVAILABLE TO CONDUCT SURVEYS IF THE AUTOMATED HEAT STRESS SYSTEM WAS INOP/FOR AREAS NOT COVERED BY THE AHSS.

OPNAVINST 5100.19D, , B0202A(6), APPENDIX B2-C, B0204

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HEAT STRESS, WBGT METER, VISTA MODEL 960

THE FOLLOWING WGBT METER, VISTA MODEL 960, DEFICIENCIES WERE NOTED:

- SHIP DID NOT HAVE AT LEAST TWO WBGT METERS ONBOARD.
- RADIANT BULB WAS DAMAGED.
- WICK WAS EXCESSIVELY DIRTY/MISSING/DAMAGED.
- METER WAS OUT OF CALIBRATION.
- METER WOULD NOT HOLD CHARGE.
- SPARE PARTS WERE NOT AVAILABLE.
- RADIANT BULB WAS MISSING.

ONE METER WAS NOT AVAILABLE TO CONDUCT SURVEYS IF THE AUTOMATED HEAT STRESS SYSTEM WAS INOP/FOR AREAS NOT COVERED BY THE AHSS.

OPNAVINST 5100.19D, APPENDIX B2-C

HEAT STRESS, WBGT SURVEY DOCUMENTATION

HEAT STRESS SURVEYS WITH A WBGT METER WERE NOT CONDUCTED:

- AT ALL MANNED WATCH/WORKSTATIONS WITHIN THE SPACE WHEN THE DRY BULB TEMPERATURE EXCEEDED 100 DEGREES F (4 HOUR OR LESS WATCH), 90 DEGREES F (WATCH GREATER THAN 4 HOURS), OR 85 DEGREES F (PHEL IV THROUGH VI).
 - IN ANY SPACE WHEN HEAT INJURY OCCURS.
- PRIOR TO CONDUCTING ECC DRILLS IF DRILL SET EXCEEDS 3 HOURS OR IF IN ALREADY REDUCED STAY TIME CONDITIONS.
 - WHERE CO DETERMINES THAT A HEAT STRESS CONDITION MAY OCCUR.
 - AS REQUIRED FOR FOLLOW-ON SURVEYS.

AUTOMATED HEAT STRESS SYSTEM WBGT SURVEY SHEETS WERE NOT PRINTED OFF ICAS/COPIED OFF ICAS AND ROUTED THROUGH THE CHAIN OF COMMAND.

OPNAVINST 5100.19D, B0204C

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HEAT STRESS, WBGT SURVEY PQS TRAINING

HEAT STRESS SURVEYORS ASSIGNED TO PERFORM WBGT SURVEYS WERE NOT TRAINED AND QUALIFIED USING SPO PQS HEAT STRESS MONITOR WATCHSTATION 303 IN NAVEDTRA 43460-4B, WITHIN 12 WEEKS OF ASSIGNMENT.

OPNAVINST 5100.19D, B0206B

LASERS AND RADIATION HAZARD INSPECTION ITEMS:

LASERS, PROGRAM

LASER SAFETY PROGRAM WAS NOT ESTABLISHED/HAD DEFICIENCIES IN THE FOLLOWING PROGRAM ELEMENTS:

- LSSO NOT ASSIGNED.
- LASER SYSTEMS SAFETY OFFICER (LSSO) NOT TRAINED.
- WORKER TRAINING NOT CONDUCTED.
- PPE NOT AVAILABLE (GOGGLES PER CLASS OF LASER).
- LASER HAZARD AREAS WERE NOT LABELED.

OPNAVINST 5100.19D, B0902A(5), B0903C B0905B SPAWARINST 5100.12B SECNAVINST 5100.14C

RADIATION. HAZARD SURVEY

- THE SHIP LACKED A CURRENT SURVEY OF ALL RADIATION (RF) HAZARDS (REQUIRED IF CURRENT SURVEY WAS CONDUCTED PRIOR TO 1995).
- IONIZING RADIATION SURVEYS HAD NOT BEEN CONDUCTED ON X-RAY MACHINES (MEDICAL AND DENTAL REQUIRED EVERY 2 YEARS, NDI REQUIRED EVERY 5 YEARS).

OPNAVINST 5100.19D, B0902A(1), B0904

RADIATION, LABELING AND MARKING

DIVISION OFFICER DID NOT ENSURE THAT RADIATION HAZARD AREAS WERE POSTED WITH THE APPROPRIATE WARNING SIGNS AND DECK MARKINGS.

LABELING AND MARKING OF RADIATION HAZARDS HAD THE FOLLOWING DEFICIENCIES:

- RED DANGER CIRCLES WERE NOT USED TO MARK RF HAZARDS.
- WARNING SIGNS WERE NOT POSTED ON MASTS OR ALOFT ACCESSES.
- THE INCORRECT TYPE RF WARNING SIGNS WERE POSTED IN THE FOLLOWING LOCATIONS:
- IONIZING RADIATION SOURCES (X-RAY VAULTS) WERE NOT MARKED WITH WARNING SIGNS AND LIGHTS.

OPNAVINST 5100.19D, B0902B, APPENDIX B9-A NAVMED P-5055 NAVSEA OP 3565/NAVAIR 16-1-529/NAVELEX 0967-LP-624-6010

RADIATION, MEDICAL SURVEILLANCE

MEDICAL SURVEILLANCE WAS NOT PROVIDED FOR PERSONNEL IN WORK CENTERS IDENTIFIED IN THE BASELINE INDUSTRIAL HYGIENE SURVEY AS REQUIRING MEDICAL SURVEILLANCE FOR EXPOSURE TO RADIATION.

OPNAVINST 5100.19D, B0905 NAVMED P-5055

RADIATION, TRAINING

LEADING PETTY OFFICERS AND DUTY SECTION LEADERS DID NOT PROVIDE AWARENESS AND HAZARD RECOGNITION TRAINING FOR ALL PERSONNEL ASSIGNED TO WORK OR STAND DUTY IN RADHAZ AREAS TO PREVENT ACCIDENTAL EXPOSURE.

(MENTION OF RF HAZARDS MUST BE INCLUDED ON SHIP'S GOING-ALOFT BILL). (IONIZING RADIATION HAZARD TRAINING MUST BE DOCUMENTED AS PART OF THE PRE-TLD BRIEF).

OPNAVINST 5100.19D, B0902C OPNAVINST 6470.2A NAVMED P-5055

LEAD CONTROL INSPECTION ITEMS:

LEAD CONTROL, ACTION LEVEL TRAINING

ALL PERSONNEL WHO ARE POTENTIALLY EXPOSED TO LEAD, AT OR ABOVE THE ACTION LEVEL AS INDICATED IN THE BASELINE IH SURVEY. WERE NOT TRAINED PRIOR TO EXPOSURE AND ANNUALLY THEREAFTER.

OPNAVINST 5100.19D B1010A 29 CFR 1910.1025

LEAD CONTROL, COMPLIANCE PLAN

WHERE LEAD EXPOSURES WARRANT, THE NEED FOR A WRITTEN LEAD CONTROL COMPLIANCE PLAN WAS NOT IDENTIFIED DURING THE INDUSTRIAL HYGIENE SURVEY.

IF SPECIFIED IN THE INDUSTRIAL HYGIENE SURVEY, SAFETY OFFICER DID NOT ENSURE A WRITTEN COMPLIANCE PLAN. TO COMPLY WITH LEAD CONTROL REQUIREMENTS. WAS AVAILABLE.

THE SUPPORTING INDUSTRIAL HYGIENIST DID NOT PREPARE A WRITTEN LEAD COMPLIANCE PLAN FOR PROCESSES IDENTIFIED AS PRODUCING EXPOSURES IN EXCESS OF THE PEL.

THE SUPPORTING INDUSTRIAL HYGIENIST DID NOT REVIEW AND UPDATE, AS NECESSARY, WRITTEN LEAD COMPLIANCE PLANS EVERY 6 MONTHS.

NOTE: THE LOCAL NEPMU OR MTF SHOULD BE CONTACTED FOR INDUSTRIAL HYGIENE SUPPORT TO IDENTIFY LEAD HAZARDS AND PROVIDE COMPLIANCE PLAN GUIDANCE.

OPNAVINST 5100.19D, B1005A, B1009 29 CFR 1910.1025

LEAD CONTROL, EVALUATION OF LEAD PROCESSES

THE BASELINE INDUSTRIAL HYGIENE SURVEY DID NOT EVALUATE ALL WORKPLACES IN WHICH LEAD WAS USED (PAINTING AND PRESERVATION, LEAD WEIGHTS IN DECK STOREROOMS, LEAD PIG TO PUNCH GROMMETS IN BUNTING SHOP, LEAD SOLDER IN 2M AREAS).

THE BASELINE IH SURVEY DID NOT PROVIDE A MONITORING PLAN FOR PROCESSES IDENTIFIED AS HAVING A POTENTIAL FOR LEAD EXPOSURE.

NOTE: THE LOCAL NEPMU OR MTF SHOULD BE CONTACTED FOR INDUSTRIAL HYGIENE SUPPORT TO IDENTIFY LEAD HAZARDS.

OPNAVINST 5100.19D, B1005, B1009

LEAD CONTROL, MEDICAL SURVEILLANCE

MEDICAL DEPARTMENT REPRESENTATIVE (MDR) DID NOT SCHEDULE PERSONNEL FOR BLOOD LEAD ANALYSIS AND PHYSICAL EXAMINATIONS AS REQUIRED FOR MEDICAL SURVEILLANCE AS INDICATED IN THE BASELINE OR OTHER IH SURVEY.

OPNAVINST 5100.19D B1008 29 CFR 1910.1025 NAVMEDCOMINST 6260.3

LEAD CONTROL, PAINT REMOVAL TRAINING

DIVISION OFFICERS DID NOT TRAIN PERSONNEL ASSIGNED TO REMOVE PAINT PER THE SAFETY PRECAUTION FOR PAINT REMOVAL IN OPNAVINST 5100.19D, CHAPTER C18.

OPNAVINST 5100.19D B1010B 29 CFR 1910.1025

LEAD CONTROL, PPE/EQUIPMENT

PROTECTIVE CLOTHING AND ENGINEERING CONTROL EQUIPMENT, AS INDICATED IN THE LEAD CONTROL PLAN, WAS NOT AVAILABLE ONBOARD FOR USE BY PERSONNEL DURING SHIPBOARD LEAD WORK.

OPNAVINST 5100.19D, B1006C 29 CFR 1910.1025

OFF-DUTY AND TRAFFIC SAFETY PROGRAM INSPECTION ITEMS:

OFF-DUTY SAFETY, COMMAND PROGRAM

THE COMMAND RECREATION, ATHLETICS, AND HOME SAFETY PROGRAM WAS NOT ESTABLISHED.

OPNAVINST 5100.25A

OFF-DUTY SAFETY, COORDINATOR ASSIGNED

A COMMAND RECREATION, ATHLETICS, AND HOME SAFETY PROGRAM MANAGER WAS NOT ASSIGNED IN WRITING.

OPNAVINST 5100.25A

OFF-DUTY SAFETY, COUNCIL PARTICIPATION

THE RAHS PROGRAM MANAGER DID NOT ATTEND THE SAFETY COUNCIL MEETINGS.

OPNAVINST 5100.25A, PARA 5(C)

OFF-DUTY SAFETY, MISHAP REPORTING

OFF-DUTY MISHAPS WERE NOT REPORTED.

OPNAVINST 5100.19D, A0609

OFF DUTY CAFETY DEC FOUID INCDECTIONS

OFF-DUTY SAFETY, REC EQUIP INSPECTIONS

SHIPBOARD RECREATIONAL OR GYM EQUIPMENT WAS NOT INSPECTED ANNUALLY (WRITTEN REPORT REQUIRED) AND DEFICIENCIES WERE NOT INCLUDED IN THE COMMAND HAZARD ABATEMENT PROGRAM.

(NOTE: MAY BE DOCUMENTED AS PART OF THE ZONE INSPECTION PROGRAM, WITH DEFICIENCIES ENTERED IN THE HAZARD ABATEMENT PLAN)

OPNAVINST 5100.25A, PARA 5C(3)

OFF-DUTY SAFETY, TRAINING

QUARTERLY RAHS HAZARD AWARENESS TRAINING WAS NOT CONDUCTED. TRAINING RECORDS WERE NOT MAINTAINED FOR TWO YEARS.

OPNAVINST 5100.25A, PARA 5C(5)(A)

TRAFFIC SAFETY, COMMAND PROGRAM

THE COMMAND TRAFFIC SAFETY PROGRAM WAS NOT ESTABLISHED.

OPNAVINST 5100.12G, PARA 5C(5)

TRAFFIC SAFETY, COORDINATOR ASSIGNED

A COMMAND TRAFFIC SAFETY COORDINATOR WAS NOT ASSIGNED, IN WRITING, BY THE COMMANDING OFFICER.

OPNAVINST 5100.12G, PARA 5(C)(5)

TRAFFIC SAFETY, MISHAP REPORTING

- MOTOR VEHICLE MISHAPS WERE NOT REPORTED WITHIN 30 DAYS OF OCCURRENCE.
- MOTOR VEHICLE MISHAP REPORTS WERE NOT IN THE CORRECT FORMAT.
- ALL MOTOR VEHICLE MISHAPS WERE NOT INVESTIGATED.
- MOTOR VEHICLE MISHAP REPORTS WERE NOT SUBMITTED.

OPNAVINST 5100.12G, ENCL (1), PARA 8(A) OPNAVINST 5100.19D, A0607A

TRAFFIC SAFETY, MOTORCYCLE TRAINING

- PERSONNEL OPERATING MOTORCYCLES ARE NOT TRACKED TO VERIFY THEIR ATTENDANCE OF AN APPROVED MOTORCYCLE SAFETY COURSE.
- COMPLETION OF THE MOTORCYCLE SAFETY COURSE WAS NOT DOCUMENTED IN THE MEMBER'S SERVICE RECORD.

OPNAVINST 5100.12G, ENCL (1), PARA 2(A)(2) AND 2(A)(6)

TRAFFIC SAFETY, ALL HANDS TRAINING

- TRAFFIC SAFETY BRIEFS WERE NOT PROVIDED PRIOR TO MAJOR HOLIDAYS, EXTENDED WEEKENDS, OR LIBERTY PERIODS.
 - TRAFFIC SAFETY BRIEFS WERE NOT DOCUMENTED.

OPNAVINST 5100.12G, PARA 7(E)(2)

PERSONAL PROTECTIVE EQUIPMENT INSPECTION ITEMS:

PPE, FUNDING

ADEQUATE COMMAND SUPPORT THROUGH FUNDING WAS NOT PROVIDED TO OBTAIN OR REPLACE MISSING OR WORN OUT PERSONAL PROTECTIVE EQUIPMENT.

OPNAVINST 5100.19D, B1202A

PPE, GLOVES

- PERSONNEL WORKING WITH CAUSTIC OR TOXIC MATERIALS WERE NOT PROVIDED WITH GLOVES SUITABLE FOR HANDLING THE MATERIAL.
- INSULATED GLOVES (NON-ASBESTOS) WERE NOT AVAILABLE FOR PERSONNEL DOING HOT WORK.
- DECK PERSONNEL WERE NOT PROVIDED WITH LEATHER GLOVES TO PROTECT AGAINST HAND INJURY WHEN HANDLING SHARP OBJECTS, WIRE ROPE, OR BANDING MATERIAL..
 - SURGICAL GLOVES WERE USED INCORRECTLY FOR CLEANING OR CHEMICAL USE.

OPNAVINST 5100.19D, B1203C(3) 29 CFR 1910.138

PPE, HARD HATS

HARD HATS USED BY CREW MEMBERS WERE NOT FREE FROM CRACKS, HOLES, PAINT, OR UNAUTHORIZED MODIFICATIONS.

OPNAVINST 5100.19D, B1203A 29 CFR 1910.135

PPE, HARNESSES AND LANYARDS

PERSONNEL WORKING ALOFT OR OVER THE SIDE WERE NOT PROVIDED WITH A PARACHUTE-TYPE SAFETY HARNESS, WITH A DYNA-BRAKE SAFETY LANYARD.

OPNAVINST 5100.19D, B1203E

PPE. PROVISION

DIVISION OFFICERS DID NOT ENSURE THAT PERSONAL PROTECTIVE EQUIPMENT WAS PROPERLY MAINTAINED/WAS NOT PROVIDED.

OPNAVINST 5100.19D, B1202C

PPE, TRAINING

DIVISION OFFICERS DID NOT ENSURE THAT PERSONNEL WHO WERE REQUIRED TO WEAR OR USE PERSONAL PROTECTIVE EQUIPMENT WERE ADEQUATELY TRAINED ON THE TYPE AND PROPER USE OF PPE.

OPNAVINST 5100.19D. B1202C

NOTE: OTHER TYPES OF PPE (SUCH AS EAR AND EYE PROTECTION) ARE ADDRESSED UNDER THE APPLICABLE PROGRAM AREA.

RESPIRATORY PROTECTION INSPECTION ITEMS:

RESP PROT, AIRLINE AND EAB EQUIPMENT

- AIRLINE MASKS AND HOSES WERE NOT FROM THE SAME MANUFACTURER.
- EAB MASKS AND HOSES WERE NOT READILY AVAILABLE NEAR THE EAB STATIONS.
- GREATER THAN 300 FEET OF HOSE WAS USED WITH AIRLINE MASKS.
- EAB AIRLINE HOSES HAD THE INCORRECT CONNECTOR FITTINGS.
- EAB STATION WAS NOT PROPERLY MARKED WITH SAFETY AND OPERATING PRECAUTIONS (PHOTOLUMINESCENT).
 - AIRLINE MASKS/HOSES WERE IN A DIRTY OR DETERIORATED CONDITION.

OPNAVINST 5100.19D, B0604B & B0606C ANSI Z88.2-1992 29 CFR 1910.134

RESP PROT, CENTRAL ISSUE

SHIP DID NOT HAVE CENTRAL CONTROL POINTS FOR ISSUING AND MAINTAINING RESPIRATORS.

OPNAVINST 5100.19D, B0602B(6) 29 CFR 1910.134

RESP PROT, FIT-TESTING

RESPIRATOR FIT-TESTING HAD THE LISTED DEFICIENCIES:

- NOT CONDUCTED PRIOR TO ISSUE AND ANNUALLY THEREAFTER.
- NOT CONDUCTED USING THE CORRECT PROTOCOL/USING THE PROTOCOL PROPERLY.
- DOCUMENTATION WAS INCORRECT OR LACKING KEY ELEMENTS, SUCH AS FIT TEST DATE OR COMPLETE MODEL NUMBER AND SIZE.
 - USED THE WRONG FIT-TEST PROTOCOL WITH THE WRONG TYPE FILTER CARTRIDGE.
- SHIP DID NOT HAVE A GRADUATE OF THE RPM COURSE TO CONDUCT OR SUPERVISE FIT-TESTING.

OPNAVINST 5100.19D, B0608 AND APPENDIX B6-C 29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT, GRADE D BREATHING AIR

BREATHING AIR, OR THE AIR OUTPUT OF PUMPS AND COMPRESSORS WHICH WERE SOURCES OF BREATHING AIR FOR AIRLINE RESPIRATORS OR SCBAS, DID NOT MEET AT LEAST THE MINIMUM REQUIREMENTS FOR GRADE D BREATHING AIR.

THE AIR OUTPUT OF COMPRESSORS USED AS BREATHING AIR WAS NOT TESTED AT LEAST QUARTERLY.

OPNAVINST 5100.19D, B0611A SHIP SPEC 551 (APPLICABLE TO NEW CONSTRUCTION ONLY) ANSI/CGA SPEC G-7.1.1997 MRC A-116 Q-5, B1 3LWP N

RESP PROT, HAZARD EVALUATION

AN EVALUATION OF ALL HEALTH HAZARDS REQUIRING THE USE OF A RESPIRATOR HAD NOT BEEN CONDUCTED (BASELINE OR FOLLOW-UP IH SURVEY).

OPNAVINST 5100.19D, B0605B 29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT, ISSUE

PERSONNEL RESPONSIBLE FOR ISSUING RESPIRATORS DID NOT ISSUE ONLY TO PERSONNEL WHO WERE TRAINED, MEDICALLY QUALIFIED, AND SUCCESSFULLY FIT-TESTED FOR THE REQUESTED RESPIRATOR.

OPNAVINST 5100.19D. B0602E 29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT, ISSUER TRAINING

RESPIRATORY PROTECTIVE EQUIPMENT ISSUE PERSONNEL WERE NOT TRAINED ON RESPIRATOR SELECTION, FIT TESTING, CARE, AND MAINTENANCE PRIOR TO SUCH ASSIGNMENT AND ANNUALLY THEREAFTER.

OPNAVINST 5100.19D, B0612C 29 CFR 1910.134

RESP PROT, MEDICAL EVALUATION

INDIVIDUALS WHO WERE PERMITTED TO WEAR RESPIRATORS WERE NOT MEDICALLY CERTIFIED FOR RESPIRATOR USE (MUST COLLECT ALL INFORMATION IN MODEL QUESTIONNAIRE IN OPNAVINST 5100.19D, APPENDIX B6-D).

DOCUMENTATION ON MEDICAL SCREENING WAS INCOMPLETE.

MEDICAL SCREENING WAS NOT CONDUCTED AT LEAST EVERY 5 YEARS (35 AND BELOW). EVERY 2 YEARS (35-45) AND ANNUALLY FOR PERSONNEL OVER THE AGE OF 45.

OPNAVINST 5100.19D, B0607A, B0614C 29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT, PROGRAM MANAGER TRAINING

RESPIRATORY PROTECTION MANAGER HAD NOT COMPLETED THE RPM FORMAL COURSE, A-4J-0082 (OR A-493-0072 FOR SHIPS WITH PRIMARY DUTY SAFETY OFFICERS). RPM MUST QUALIFY WITHIN 3 MONTHS OF ASSUMING THE POSITION.

OPNAVINST 5100.19D, B0602A, BO602B 29 CFR 1910.134

RESP PROT, PROGRAM ROSTER

 THE RPM DID NOT MAINTAIN A ROSTER OF PERSONNEL ENROLLED IN RESPIRATORY PROTECTION.

OPNAVINST 5100.19D, B0602B(4)

29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT. RESPIRATOR SELECTION

RESPIRATORS AND CARTRIDGES WERE NOT SELECTED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE CURRENT INDUSTRIAL HYGIENE SURVEY.

OPNAVINST 5100.19D, B0605B 29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT, RESPIRATORS

- THE SHIP DID NOT HAVE A SUFFICIENT SUPPLY OF NIOSH OR NIOSH/MSHA-APPROVED RESPIRATORS, SPARE PARTS, AND EXPENDABLE SUPPLIES (CARTRIDGES AND FILTERS) TO CONDUCT ROUTINE AND EMERGENCY OPERATIONS.
- AT LEAST 3 SIZES OF ELASTOMERIC FACE PIECES AND ASSOCIATED SUPPLIES FROM AT LEAST 2 MANUFACTURERS WERE NOT AVAILABLE ON BOARD.
 - RESPIRATORS WERE FOUND ADRIFT IN THE FOLLOWING LOCATIONS:
- RESPIRATORS WERE OBSERVED BEING INCORRECTLY USED IN THE FOLLOWING LOCATIONS:

OPNAVINST 5100.19D, B0602B(2) 29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT, RPM APPOINTED

A RESPIRATORY PROTECTION MANAGER WAS NOT APPOINTED.

OPNAVINST 5100.19D, B0602A, BO602B 29 CFR 1910.134

RESP PROT, SCBA DEFICIENCIES

- SELF-CONTAINED BREATHING APPARATUS (SCBA), PRESSURE-DEMAND TYPE (MSA ULTRALITE II WITH 30 MINUTE STEEL CYLINDER, NSN 4240-01-251-9401 OR EQUIVALENT) WERE NOT PROVIDED ONBOARD FOR THE HAZARDOUS MATERIAL EMERGENCY RESPONSE TEAM/ IOSPAR SPILL TEAM/ OTTO FUEL II SPILL TEAM (SPECIFY).
- SCBA UNITS HAD DEFECTIVE BREATHING TUBE HOSE CONNECTIONS (MSA BELT-MOUNTED REGULATOR PART NR 801165, 803506, AND 470734).
- PMS WAS NOT CONDUCTED ON SCBA UNITS TO ENSURE BREATHING TUBE HOSE CONNECTION INTEGRITY (MRC A-116 Q-5, B1 3LWP N).

OPNAVINST 5100.19D, B0604B(2)(A) MRC A-116 Q-5, B1 3LWP N NSTM 074

RESP PROT, STORAGE, CLEANING AND MAINTENANCE

- RESPIRATORS WERE FOUND IMPROPERLY STORED IN THE FOLLOWING LOCATIONS:
- RESPIRATORS WERE FOUND IMPROPERLY CLEANED IN THE FOLLOWING LOCATIONS:

- RESPIRATOR FACEPIECES WERE NOT CORRECTLY CLEANED AND SANITIZED.
- RESPIRATOR SPARE PARTS WERE NOT AVAILABLE/MAINTAINED TO REPAIR RESPIRATORS.
- RESPIRATOR FACEPIECES WERE NOT STORED FLAT AND KEPT IN PLASTIC BAGS.

OPNAVINST 5100.19D, B0609 29 CFR 1910.134 ANSI Z88.2-1992

RESP PROT, USER TRAINING

PERSONNEL WHO USED RESPIRATORS WERE NOT TRAINED ON RESPIRATOR SELECTION, USE, SEAL CHECKS, CARE, AND MAINTENANCE PRIOR TO INITIAL USE AND ANNUALLY THEREAFTER.

RESPIRATOR TRAINING FOR USERS WAS NOT DOCUMENTED.

OPNAVINST 5100.19D, B0612A 29 CFR 1910.134

GENERAL SAFETY PROGRAM MANAGEMENT INSPECTION ITEMS:

The following records and documents will be reviewed with the Safety Officer by the NAVOSH Inspector. It is recommended that these records be located prior to the start of the inspection and placed in one area, if feasible, for easy review. This includes print-outs of training records from COMPASS or R-ADMIN for any required courses and PQS.

Other administrative records for specific inspection areas, such as Gas-Free or Electrical Safety, are listed in the individual topic sections.

- 1. LAST QUARTER'S CSMP, SAFETY HAZARD REPORT OR OPTION "D", COPY THAT WAS REVIEWED (CORRECTED OR ANNOTATED) BY THE SAFETY OFFICER.
- 2. BASELINE IH SURVEY AND ANY RECORDS OF ANY FOLLOW-UP TESTING OR REPEAT SURVEYS.
- 3. FILE OF MISHAP REPORTS FOR THE LAST 5 YEARS (OR WHATEVER IS AVAILABLE).
- 4. FILE OF ACCIDENT AND INJURY REPORTS SAFETY OFFICER'S COPIES.
- 5. A COPY OF THE APPLICABLE ASBESTOS PROTOCOL(S) AND LEAD CONTROL PLAN, IF APPLICABLE.
- 6. HAZARD REPORTS FOR THE PAST YEAR, ZIDL'S/DIVISION IN SPOTLIGHT RESULTS
 ANNOTATED WITH CORRECTED ITEMS OR STATUS, OR LOG OF SAFETY HAZARDS TRACKED
 TO CORRECTION.
- 7. TRAINING PLAN FOR I-DIVISION SHOWING SAFETY TOPICS, AND ANY OTHER ROUTINE TRAINING PLAN, LISTING, OR SCHEDULE FOR ANNUAL REQUIRED NAVOSH TOPICS (SUCH AS ELECTRICAL SAFETY).
- 8. LIST OF PERSONNEL PQS QUALIFIED IN SAFETY PROGRAMS AFLOAT PQS 43460-4A OR 4B:
 - WATCHSTATION 301 SAFETY PETTY OFFICER
 - WATCHSTATION 302 ELECTRICAL TOOL ISSUE PETTY OFFICER
 - WATCHSTATION 303 HEAT STRESS MONITOR
 - WATCHSTATION 304 ELECTRICAL SAFETY OFFICER
- 9. HAZMAT/ENVIRONMENTAL PROTECTION PQS 43528, WATCHSTATION 304 HM AND OIL SPILL RESPONSE SCENE LEADER.
- 10. LIST OF PERSONNEL HOLDING THE SNEC 9595 FOR HMC&M TECHNICIAN.
- 11. COLLATERAL DUTY LIST DESIGNATING AT LEAST THE SAFETY OFFICER, HM COORDINATOR & HM SUPERVISOR, TRAFFIC SAFETY COORDINATOR, RAHS COORDINATOR, SAFETY PETTY OFFICERS, MEMBERS OF SAFETY COUNCIL AND COMMITTEE, RESPIRATORY PROTECTION MANAGER, LSSO, GFE, AND ELECTRICAL OFFICER (AS APPLICABLE).

SAFETY MNGMNT, ACCIDENT AND INJURY REPORTS

ACCIDENT/INJURY REPORTS WERE NOT PROVIDED TO THE SAFETY OFFICER.

SAFETY DID NOT USE ACCIDENT AND INJURY REPORTS TO TRACK MISHAP TRENDS.

OPNAVINST 5100.19D, A0203D(3)

CAFETYANICANIT DAOFUNE HARVEY

SAFETY MNGMNT. BASELINE IH SURVEY

BASELINE INDUSTRIAL HYGIENE (IH) SURVEY HAD NOT BEEN CONDUCTED/WAS INCOMPLETE/FINAL REPORT HAD NOT BEEN RECEIVED.

NOTE: BASELINE IH SURVEYS CAN BE OBTAINED FROM THE LOCAL NAVY ENVIRONMENTAL AND PREVENTIVE MEDICINE UNIT OR THE LOCAL BUMED SUPPORT ACTIVITY (NAVAL HOSPITAL/NAVAL MEDICAL CLINIC.

OPNAVINST 5100.19D, A0304B

SAFETY MNGMNT, BASELINE SURVEY REPORT

BASELINE INDUSTRIAL HYGIENE (IH) SURVEY REPORT DID NOT CONSIST OF THE FOLLOWING REQUIRED ELEMENTS:

- DETAILED WORKCENTER HAZARD EVALUATION RESULTS (PROCESSES AND CONTAMINANTS).
 - SAMPLING RESULTS.
- SUMMARY OF CONTROLS (VENTILATION, RESPIRATORY PROTECTION, AND PPE REQUIREMENTS).
 - ROUTINE MONITORING LIST.
 - LIST OF NOISE HAZARDOUS AREAS/PROCESSES.
 - LIST OF EYE HAZARDOUS AREAS/PROCESSES.
 - MEDICAL SURVEILLANCE REQUIREMENTS.

NOTE: BASELINE IH SURVEYS CAN BE OBTAINED FROM THE LOCAL NAVY ENVIRONMENTAL AND PREVENTIVE MEDICINE UNIT OR THE LOCAL BUMED SUPPORT ACTIVITY, NAVAL HOSPITAL/NAVAL MEDICAL CLINIC.

OPNAVINST 5100.19D, A0304B

SAFETY MNGMNT, DEFICIENCY ABATEMENT

- THE SAFETY OFFICER DID NOT UTILIZE DISCREPANCY SHEETS FROM ASSIST VISITS, ZONE INSPECTIONS, AND OTHER INSPECTIONS TO IDENTIFY HAZARDS AND ENTER THESE HAZARDS INTO THE NAVOSH DEFICIENCY ABATEMENT PLAN/CSMP.
 - IDENTIFIED HAZARDS WERE NOT ENTERED INTO THE CSMP AND ASSIGNED A RAC CODE.
 - THE SAFETY OFFICER DID NOT MAINTAIN A QUARTERLY UPDATED COPY OF THE CSMP.
 - CORRECTIVE ACTIONS WERE NOT TRACKED TO CORRECTION.
 - DOCUMENTATION WAS NOT AVAILABLE TO TRACK CORRECTED HAZARDS.

NOTE: AN AUTOMATED ACCESS 97 HAZARD ABATEMENT DATABASE (HADAP) IS AVAILABLE FOR DOWNLOAD FROM www.navosh.net OR www.spawar.navy.mil/fleet/insury, INSP PREPS, NAVOSH.

OPNAVINST 5100.19D A0404B AND A0404F

SAFETY MNGMNT, ENLISTED SAFETY COMMITTEE

SAFETY COMMITTEE WAS DEFICIENT AS INDICATED.

- ENLISTED SAFETY COMMITTEE DID NOT MEET AT LEAST QUARTERLY (OR AS REQUIRED IN THE SHIP'S OWN INSTRUCTION).
 - ALL DIVISIONS DID NOT CONSISTENTLY PARTICIPATE IN THE ENLISTED SAFETY COMMITTEE.

- EACH DIVISION WAS NOT REPRESENTED.
- SAFETY COMMITTEE MINUTES (OR ISSUES AND RECOMMENDATIONS) WERE NOT PROVIDED TO THE SAFETY COUNCIL AND COMMANDING OFFICER.
- COMMITTEE MEETING MINUTES WERE NOT AVAILABLE/NOT MAINTAINED BY THE SAFETY OFFICER.
 - THE CMAA DID NOT ATTEND THE SAFETY COMMITTEE MEETINGS.

OPNAVINST 5100.19D A0203I OPNAVINST 3120.32C

SAFETY MNGMNT, HAZARD REPORTS

- SAFETY HAZARD REPORTS WERE NOT AVAILABLE/BEING USED TO DOCUMENT HAZARDS.
- HAZARD REPORTS (OPNAV 3120/5) WERE NOT AVAILABLE TO ALL HANDS.
- HAZARD REPORTS WERE NOT ANNOTATED WITH CORRECTIVE ACTIONS AND COMPLETION DATES.
- THE NUMBER AND QUALITY OF HAZARD REPORTS INDICATED THIS WAS AN INEFFECTIVE PROGRAM.
- WHEN REPORTS WERE SUBMITTED BY CREW MEMBERS, CONDITIONS WERE NOT INVESTIGATED AND RESPONSES WERE NOT PROVIDED PROMPTLY (WITHIN 10 DAYS).
- RESPONSES TO APPEALS, REGARDING CONDITIONS REPORTED TO THE COMMANDING OFFICER, WERE NOT PROVIDED PROMPTLY (WITHIN 10 DAYS).

OPNAVINST 5100.19D A0307, APPENDIX A3-B OPNAVINST 3120.32C

SAFETY MNGMNT, MEDICAL SURVEILLANCE

MEDICAL SURVEILLANCE WAS NOT PROVIDED FOR PERSONNEL ASSIGNED TO DUTIES INVOLVING CHT/OTTO FUEL/OTHER OCCUPATIONAL EXPOSURES AS INDICATED IN THE IH SURVEY REPORT (SPECIFY).

OPNAVINST 5100.19D, A0310B

SAFETY MNGMNT, MISHAP REPORTS

- MISHAP REPORTS WERE NOT SUBMITTED IN A TIMELY AND ACCURATE MANNER (WITHIN 30 DAYS OF OCCURRENCE).
- SAFETY OFFICER DID NOT MAINTAIN A COMPLETE FILE (REPORTS RETAINED FOR 5 YEARS) OF MISHAP REPORTS REQUIRED BY HIGHER AUTHORITY, INTERNAL/NEAR MISHAP REPORTS, AND INJURY REPORTS.
- MISHAPS REPORTS WERE INCOMPLETE OR INCORRECTLY WRITTEN (WRONG REPORT FORMAT OR REFERENCE).
 - MISHAP REPORTS DID NOT INCLUDE CAUSAL FACTORS.

OPNAVINST 5100.19D, A0605

SAFETY MNGMNT, NAVOSH TRAINING

ALL PERSONNEL DID NOT RECEIVE NAVOSH PROGRAM TRAINING UPON REPORTING ABOARD AND ANNUALLY THEREAFTER.

THERE WAS NO DOCUMENTATION AVAILABLE ON ALL HANDS/I-DIV NAVOSH TRAINING.

NAVOSH INDOC TRAINING DID NOT INCLUDE ALL OF THE FOLLOWING TOPICS:

- INTRO TO NAVOSH, IDENTIFICATION OF POCS, CHAIN OF COMMAND, AND MISHAP REPORTING.
 - HAZARD IDENTIFICATION AND RISK ASSESSMENT.
 - SAFETY PRECAUTIONS AND STANDARDS.
 - SAFETY WARNING/CAUTION SIGNS AND DECK MARKINGS.
 - MISHAP PREVENTION AND BACK INJURY PREVENTION.
 - HAZARDOUS MATERIAL EMERGENCY SPILL RESPONSE.

OPNAVINST 5100.19D, ARTICLE A0503C AND APPENDIX A5-A

SAFETY MNGMNT, SAFETY COUNCIL

THE SAFETY COUNCIL WAS DEFICIENT AS INDICATED:

- DID NOT MEET AT LEAST QUARTERLY.
- CO OR XO DID NOT PARTICIPATE.
- MEETING MINUTES WERE NOT MAINTAINED/AVAILABLE.

OPNAVINST 5100.19D A0203H OPNAVINST 3120.32C

SAFETY MNGMNT, SAFETY OFFICER TRAINING

THE SAFETY OFFICER DID NOT ATTEND THE AFLOAT SAFETY OFFICER COURSE (A-4J-0020) PRIOR TO, OR WITHIN SIX MONTHS OF, ASSUMING DUTY, OR AS PART OF SURFACE WARFARE OFFICER SCHOOL DEPARTMENT HEAD COURSE.

OPNAVINST 5100.19D, A0503A

SAFETY MNGMNT, SAFETY OFFICER

A COMMAND PRIMARY OR COLLATERAL DUTY SAFETY OFFICER WAS NOT DESIGNATED BY THE COMMANDING OFFICER.

OPNAVINST 5100.19D, A0203B

SAFETY MNGMNT. SAFETY TRENDS

THE SAFETY OFFICER DID NOT MAINTAIN AND ANALYZE NAVOSH RECORDS (INSPECTIONS. SURVEYS, INJURY REPORTS, HAZARD REPORTS, & MISHAP STATISTICS) TO DETERMINE TRENDS.

OPNAVINST 5100.19D, A0203C(6)

SAFETY MNGMNT, SPO ASSIGNMENT

AN E-5 OR ABOVE SAFETY PETTY OFFICER WAS NOT APPOINTED FOR EACH DIVISION.

OPNAVINST 5100.19D, A0203E(6)

SAFETY MNGMNT, SPO FORMAL TRAINING

50% OF DIVISION SAFETY PETTY OFFICERS HAD NOT ATTENDED THE SAFETY PROGRAM AFLOAT COURSE (A-493-2099) PRIOR TO, OR WITHIN 6 MONTHS OF, ASSUMING THEIR DUTIES. ____ OF ____ HAD ATTENDED TRAINING (REQUIRED FOR 50% OF THOSE ASSIGNED).

OPNAVINST 3120.32C

OPNAVINST 5100.19D A0503B
SAFETY MNGMNT, SPO PQS TRAINING
100% OF DIVISION SAFETY PETTY OFFICERS DID NOT COMPLETE THE PQS FOR SAFETY PROGRAMS AFLOAT (NAVEDTRA 43460-4A) WITHIN SIX MONTHS OF BEING ASSIGNED DUTIES OF HAD COMPLETED THE PQS (100% REQUIRED).
OPNAVINST 5100.19D, A0503B
SAFETY MNGMNT, STAND-DOWN
COMMAND DID NOT CONDUCT A SAFETY STAND-DOWN WITHIN THE PAST YEAR.
OPNAVINST 5100.19D, A0503E
SAFETY MNGMNT, WORKPLACE INSPECTIONS
A SAFETY INSPECTION WAS NOT CONDUCTED OF EVERY WORK SPACE ABOARD THE SHIP WITHIN THE PAST YEAR (MAY BE CONDUCTED AS PART OF THE ZONE INSPECTION PROGRAM)
OPNAVINST 5100.19D. A0303B

SIGHT CONSERVATION INSPECTION ITEMS:

SIGHT CONSERVATION, EYE HAZARD LIST

THE SAFETY OFFICER DID NOT MAINTAIN A LISTING OF AREAS, PROCESSES AND OPERATIONS WHICH REQUIRE EYE PROTECTION, AND AREAS THAT REQUIRE AN EYEWASH OR DELUGE SHOWER.

OPNAVINST 5100.19D, B0502A(2)

SIGHT CONSERVATION, EYE HAZARD SIGNS

THE FOLLOWING EYE HAZARDOUS AREAS WERE NOT PROPERLY MARKED WITH YELLOW AND BLACK CAUTION SIGNS:

("CAUTION EYE PROTECTION REQUIRED IN THIS AREA" SIGN NSN 9Q/9905-01-100-8203).

OPNAVINST 5100.19D, B0504B

SIGHT CONSERVATION, HAZARD EVALUATION

EYE HAZARDOUS AREA WERE NOT IDENTIFIED AND EVALUATED IN THE BASELINE OR FOLLOW-UP IH SURVEYS, INCLUDING RECOMMENDATIONS FOR THE TYPES OF EYE PROTECTION.

OPNAVINST 5100.19D, B0504A

SIGHT CONSERVATION, SAFETY EYEWEAR

PROTECTIVE EYEWEAR (SAFETY GLASSES, PRESCRIPTION SAFETY GLASSES, GOGGLES, FACE SHIELDS, CHIPPING GOGGLES, WELDING HELMETS, WELDING GOGGLES, FACE SHIELDS), BOTH CORRECTIVE AND NON-CORRECTIVE, HAD THE FOLLOWING DEFICIENCIES:

- WERE NOT STAMPED "Z87".
- WERE NOT IN GOOD CONDITION (CLEAN AND UNDAMAGED).
- WERE NOT MADE AVAILABLE.
- REQUIRED PROTECTIVE EYEWEAR WAS NOT BEING WORN.
- WERE NOT CORRECTLY SELECTED FOR THE HAZARD/WERE THE WRONG TYPE OF PROTECTION FOR THE HAZARD.

OPNAVINST 5100.19D, B0506, APPENDIX A5-A

SIGHT CONSERVATION, TRAINING

DIVISION OFFICER OR WORKCENTER SUPERVISOR DID NOT CONDUCT TRAINING FOR PERSONNEL ASSIGNED TO WORKCENTERS WITH EYE HAZARDOUS AREAS OR PROCESSES AT THE TIME THAT PROTECTIVE EYE WEAR WAS ISSUED.

OPNAVINST 5100.19D, B0509

SIGHT CONSERVATION, UV REFLECTION HAZ

BULKHEADS, LOCKERS, REFLECTIVE SURFACES, AND THE OVERHEAD IN WELDING AREA WERE NOT PAINTED FLAT BLACK TO MINIMIZE PERSONNEL EXPOSURE TO REFLECTED ULTRAVIOLET LIGHT FROM THE WELDING ARC.

NSTM 631 SHIP SPEC 631 (APPLICABLE TO NEW CONSTRUCTION ONLY) **GSO 665C**

SIGHT CONSERVATION, WELDING CURTAIN

WELDING CURTAIN (NON-FLAMMABLE):

- WAS NOT PROVIDED.
- DID NOT FULLY ENCLOSE THE WELDING AREA.
- WAS NOT NAVSEA APPROVED MATERIAL.
- WAS IN DETERIORATED CONDITION.
- PORTABLE WELDING SCREENS OR CURTAINS WERE NOT PROVIDED.

NAVSEA-APPROVED SOURCES OF MADE-TO-ORDER WELDING CURTAINS:

- PACIFIC NORTHWEST (206) 762-7600.
- HAWAII (808) 842-2122.
- SOUTHWEST (213) 749-4779.
- MID-ATLANTIC (757) 855-7700.
- NORTHEAST (716) 427-7780.
- SOUTHEAST (864) 299-1770.
- MID-SOUTH (504) 647-9682.

OPNAVINST 5100.19D, C1101 **NSTM 631** SHIP SPEC 631 (APPLICABLE TO NEW CONSTRUCTION ONLY) NAVSEA MIL SPEC MIL-C-24576 (SH) OF 27 JUL 87 NSTM 074 VOL 1 **GSO 665C** MIL-C-24576, TYPE I, CLASS I (HEAVY)

MIL-C-24576, TYPE I, CLASS II (LIGHT)

TAG-OUT PROGRAM INSPECTION ITEMS:

TAG-OUT, ALL HANDS TRAINING

DOCUMENTATION WAS NOT AVAILABLE TO VERIFY THAT ALL NEWLY REPORTING PERSONNEL HAD RECEIVED INDOCTRINATION TRAINING ON THE TAG-OUT PROGRAM.

OPNAVINST 5100.19D, B1102A NAVSEA S0400-AD-URM-101 TAGOUT USER'S MANUAL (TUM)

TAG-OUT, DOCUMENTATION

- SHIPS DID NOT HAVE A COPY OF THE TAG-OUT BILL (OPNAVINST 3120.32C) MAINTAINED IN THE TAG-OUT LOG.
- AUTHORIZING OFFICERS WERE NOT DESIGNATED IN WRITING BY THE COMMANDING OFFICER BY NAME, POSITION, OR BILLET.
 - TAG-OUT AUDITS WERE NOT CONDUCTED.
- TAG-OUT AUDITS WERE NOT CONDUCTED/ AT LEAST BI-WEEKLY (OR AS REQUIRED BY SHIP'S OWN INSTRUCTION IF APPLICABLE).
- DANGER/CAUTION TAG COMPONENT LOCATION DID NOT MATCH THE LOCATION WHERE THE TAG WAS HUNG.
 - DANGER/CAUTION TAG WAS NOT COMPLETED CORRECTLY.

OPNAVINST 5100.19D, B1102 OPNAVINST 3120.32C, SEC 630.17 NAVSEA S0400-AD-URM-101 TAGOUT USER'S MANUAL (TUM)

TAG-OUT, LOG AND RECORDKEEPING

TAG-OUT LOG HAD THE FOLLOWING DEFICIENCIES:

- DID NOT MAINTAIN COPIES OF CURRENT AND CLEARED TAGS.
- LOG SHEETS DID NOT INCLUDE SERIAL NUMBERS, LOCATION, DATE AND TIME, AND SIGNATURES.
 - AUDITS OF THE TAG-OUT LOG WERE NOT RECORDED IN THE LOG.
 - SHEETS WERE MISSING.
 - ENTRIES WERE INCOMPLETE.

OPNAVINST 5100.19D, B1102 OPNAVINST 3120.32C, SEC 630.17 NAVSEA S0400-AD-URM-101 TAGOUT USER'S MANUAL (TUM)

TAG-OUT, USER TRAINING

DOCUMENTATION WAS NOT AVAILABLE TO VERIFY THAT PERSONNEL ASSIGNED TO PREPARE TAG-OUTS, REVIEW TAG-OUTS, POSITION EQUIPMENT, POST TAGS, CHECK POSTED TAGS, CLEAR TAGS, OR PERFORM TAG AUDITS WERE QUALIFIED ON THE TAGOUT USER'S MANUAL (COMPLETION OF 3M PQS, WATCHSTATION 301).

OPNAVINST 5100.19D, B1102 NAVSEA S0400-AD-URM-101 TAGOUT USER'S MANUAL (TUM), ARTICLE 1.4

SAFETY AND NAVOSH WALKTHROUGH:

In addition to reviewing programs and administration, the INSURV inspector will conduct a walkthrough inspection of all engineering and industrial areas. It is recommended that there be an escort from safety to assist the inspector in getting locked spaces opened and in taking notes. During the walkthrough, the inspector will verify the installation and function of the following:

- * VENTILATION SYSTEMS, SUCH AS WELDING TRUNKS, SLOT HOODS, DIP TANK EXHAUST HOODS, OR OTHER LOCAL EXHAUST OR GENERAL VENTILATION IN STOREROOMS, WORKSHOPS, FLAMMABLE LIQUID STOREROOMS, PAINT ISSUE, AND THE HAZMINCEN.
- * LIGHTING AND GENERAL SAFETY HOUSEKEEPING IN WORK CENTERS.
- * HAZARDOUS MATERIAL STORAGE AND LABELING, AND SPECIAL HAZMAT STORAGE LIKE FLAMMABLE LIQUID STORAGE CABINETS OR ACID CABINETS..
- * DECK CONDITION, TRIP AND OVERHEAD HAZARDS, WORKSHOP SAFETY MARKINGS, AND NON-SKID PLACEMENT.
- * MACHINE GUARDS ON INDUSTRIAL MACHINES (LATHES, DRILL PRESSES, SAWS, MILLING MACHINES, GRINDERS, SHEET METAL MACHINES, AND ROTATING BELTS OR SHAFTS).
- * WEIGHT TEST TAGS ON MONORAILS AND WEIGHT HANDLING EQUIPMENT.
- * WEIGHT TEST TAGS AND CONDITION OF ACCESS TRUNK SAFETY NETS.
- * WORKBENCHES (ELECTRICAL OR MECHANICAL) FOR HAZARD POSTING AND SAFE CONSTRUCTION.
- * ALL SAFETY PRECAUTION SIGNS AND SAFETY HAZARD SIGNS (EYE, NOISE, ETC).
- * EMERGENCY EYE WASH STATIONS AND/OR DELUGE SHOWERS FOR FUNCTION.
- * OTHER SAFETY OR OCCUPATIONAL HEALTH HAZARDS OR POTENTIAL HAZARDS IDENTIFIED IN THE BASELINE IH SURVEY (MERCURY, PCB'S, ASBESTOS GASKET MATERIAL, TOXIC MATERIALS).
- * CONDITION AND STORAGE OF PPE IN WORK SPACES.

EMERGENCY EYE WASH STATIONS AND DELUGE SHOWERS:

WHEN INSPECTING EMERGENCY EYEWASH STATIONS AND EYEWASH/DELUGE SHOWERS, ALL TYPES OF PLUMBED, SINK-MOUNTED, OR FAUCET-MOUNTED UNITS, THE FOLLOWING DEFICIENCIES MAY BE FOUND, AS APPLICABLE:

- WAS DAMAGED.
- HAD MISSING PARTS.
- HAD LOW WATER.
- HAD RESTRICTED FLOW RATES.
- HAD AN INOPERABLE ALARM.
- DID NOT MEET ANSI STANDARDS/SHOWER DID NOT HAVE A STAY-OPEN VALVE.
- WAS OBSTRUCTED.
- WAS NOT PMS'ED.
- WAS NOT WITHIN 10 SECONDS OR 100 TRAVEL FEET OF THE HAZARD.
- DID NOT HAVE THE ROOT VALVE LOCKED OPEN.

- DID NOT HAVE THE ROOT VALVE MARKED AS A "W" FITTING.
- WAS NOT CORRECTLY INSTALLED.
- WAS NOT INSTALLED AS REQUIRED FOR THE CORROSIVE HAZARD.
- WAS INOPERABLE.
- SHOWER HEAD HEIGHT WAS NOT HIGHER THAN 84 INCHES FROM THE USER STANDING SURFACE.
- EYEWASH WAS NOT LOWER THAN 33 INCHES NOR HIGHER THAN 45 INCHES OFF THE DECK, AND AT LEAST 6 INCHES FROM THE BULKHEAD OR ANY OBSTRUCTION.
 - DID NOT MEET THE MINIMUM FLOW RATE OF 0.4 GALLONS FOR 15 MINUTES.
 - WAS NOT PROVIDED WITH AN INSTRUCTIONAL SIGN FOR THE ALARM.
 - DID NOT HAVE A GREEN SIGN WITH WHITE LETTERING MARKING THE EYE WASH LOCATION.
- WAS NOT PROVIDED WITH A PROPERLY LOCATED AND LABELED VISUAL AND AUDIBLE ALARM THAT INTERLOCKS WITH THE ACTUATION DEVICE (REMOTE LOCATIONS ONLY).

PARTS FOR SELLSTROM UNITS - 1-800-323-7402.

PARTS FOR HAWS UNITS - (510) 525-5801.

PARTS FOR SPEAKMAN UNITS - 1-800-537-2107

PARTS FOR FEND-ALL UNITS - (847) 577-0257.

PARTS FOR GUARDIAN UNITS - (312) 733-2626.

OPNAVINST 5100.19D, B0508

SHIP SPEC 644C (APPLICABLE TO NEW CONSTRUCTION ONLY)

GSO 644C

ANSI Z358.1-1990

WHEN INSPECTING PORTABLE PLASTIC OR PRESSURIZED CAN-TYPE EMERGENCY EYEWASH STATIONS, THE FOLLOWING DEFICIENCIES MAY BE FOUND, AS APPLICABLE:

- WAS DAMAGED.
- HAD MISSING PARTS.
- HAD RESTRICTED FLOW RATES.
- DID NOT MEET ANSI STANDARDS (MUST BE 14-16 GALLON SIZE).
- WAS OBSTRUCTED.
- WAS NOT PMS'ED.
- WAS NOT WITHIN 10 SECONDS OR 100 TRAVEL FEET OF THE HAZARD.
- WAS NOT CORRECTLY INSTALLED.
- WAS NOT INSTALLED AS REQUIRED FOR THE CORROSIVE HAZARD.
- WAS EMPTY OR HAD A LOW WATER LEVEL.
- DID NOT MEET THE MINIMUM FLOW RATE OF 0.4 GALLONS FOR 15 MINUTES.
- DID NOT HAVE A GREEN SIGN WITH WHITE LETTERING MARKING THE EYE WASH LOCATION.
- HAD A CRIMPED WATER SUPPLY TUBE.

PARTS FOR SELLSTROM UNITS - 1-800-323-7402.

PARTS FOR HAWS UNITS - (510) 525-5801.

PARTS FOR FEND-ALL UNITS - (847) 577-0257.

PARTS FOR SPEAKMAN UNITS - 1-800-537-2107.

PARTS FOR GUARDIAN UNITS - (312) 733-2626...

NOTE: PERSONAL EYE WASH BOTTLES ARE ONLY AUTHORIZED FOR SUBMARINE USE.

OPNAVINST 5100.19D, B0508

SHIP SPEC 644C (APPLICABLE TO NEW CONSTRUCTION ONLY)

GSO 644C

ANSI Z358.1-1990

WORKSHOP AND GENERAL SAFETY EQUIPMENT ITEMS:

GEN SAFETY, BENCH/PEDESTAL GRINDERS

BENCH AND/OR PEDESTAL GRINDER HAD THESE DEFICIENCIES:

- WHEEL WAS NOT DRESSED.
- TOOL REST WAS GREATER THAN 1/8 INCH FROM WHEEL.
- SHATTERPROOF SHIELD (EYE GUARD) MISSING.
- TOOL REST MISSING.
- TONGUE GUARD WAS GREATER THAN 1/4 INCH FROM THE WHEEL.
- TONGUE GUARD WAS MISSING.
- WHEEL WAS CRACKED OR DAMAGED.
- LIGHT BULB IN EYE SHIED BROKEN/MISSING.
- DUST COLLECTOR BAG (FLAME-PROOF) WAS MISSING/DAMAGED.

NOTE: EYE SHIELDS ARE NOT NORMALLY INSTALLED ON THE "WET" GRINDING WHEEL SIDE, BUT EYE PROTECTION IS STILL REQUIRED.

GOV'T SOURCE OF UNIVERSAL MACHINE GUARDS- ROCKFORD SYSTEMS, INC. AT 1-800-922-7533 OR SALES@ROCKFORDSYSTEMS.COM.

OPNAVINST 5100.19D, C1304G(5) 29 CFR 1910.219 SHIP SPEC 665 (APPLICABLE TO NEW CONSTRUCTION ONLY) ANSI B11.9

GEN SAFETY, DRILL PRESSES

POINT-OF-OPERATION GUARD (MOVABLE TELESCOPING DRILL SHIELD OR SAFETY CHIP SHIELD) WAS NOT INSTALLED ON THE DRILL PRESS.

GOV'T SOURCE OF UNIVERSAL MACHINE GUARDS- ROCKFORD SYSTEMS, INC. AT 1-800-922-7533 OR E-MAIL SALES@ROCKFORDSYSTEMS.COM.

OPNAVINST 5100.19D C1304A NAVSEA GSO 665C SHIP SPEC 665B (APPLICABLE TO NEW CONSTRUCTION ONLY) ANSI B11.8 29 CFR 1910.212

GEN SAFETY. HATCHES AND SCUTTLES

- HATCHES/OPENINGS WERE MISSING SAFETY CHAINS AT THE FOLLOWING LOCATIONS:
- SAFETY HOLD OPEN DEVICES WERE DEFECTIVE ON SCUTTLES/HATCHES AS FOLLOWS:
- HATCHES/OPENINGS LACKED GRAB RAILS IN THE FOLLOWING LOCATIONS:

OPNAVINST 5100.19D, C0102 GSO 622 AND 624 SHIP SPECS 624 (APPLICABLE TO NEW CONSTRUCTION ONLY)

GEN SAFETY, LADDERS

- LADDERS WERE MISSING SAFETY CHAINS AT THE FOLLOWING LOCATIONS:
- PINS, RAILINGS, OR STEPS WERE MISSING/UNSAFE/DEFECTIVE ON LADDERS AS FOLLOWS:

- VERTICAL LADDERS WERE OBSTRUCTED/DETERIORATED/UNSAFE IN THE FOLLOWING LOCATIONS:

OPNAVINST 5100.19D, C0102 GSO 622 AND 624 SHIP SPECS 624 (APPLICABLE TO NEW CONSTRUCTION ONLY)

GEN SAFETY, LATHES

POINT-OF-OPERATION GUARDS (SPECIFY EITHER MOVABLE SAFETY SHIELD, CHUCK GUARD AND/OR CROSSLIDE TRAVEL STEEL FRAME LATHE SHIELD) WERE NOT INSTALLED ON THE LATHE.

GOV'T SOURCE OF UNIVERSAL MACHINE GUARDS- ROCKFORD SYSTEMS, INC. AT 1-800-922-7533 OR E-MAIL SALES@ROCKFORDSYSTEMS.COM..

OPNAVINST 5100.19D C1304G(5) NAVSEA GSO 665C SHIP SPEC 665B (APPLICABLE TO NEW CONSTRUCTION ONLY) ANSI B11.6 29 CFR 1910.212

GEN SAFETY, MATERIAL HANDLING EQUIPMENT

- MONORAIL DID NOT HAVE A LOAD TEST PERFORMED WITHIN THE LAST 4 YEARS.
- MONORAIL WAS NOT TAGGED OR MARKED TO INDICATE THAT THE LOAD TEST WAS COMPLETED.
- MONORAIL LOAD TEST INFORMATION WAS NOT RECORDED IN A PERMANENT LOG (EQUIPMENT IDENTIFICATION, DATE OF TEST, DESCRIPTION OF TEST, WEIGHT USED FOR TEST, AND TESTING ACTIVITY).
- MONORAIL TRACK/CRANE RAIL HAD INSUFFICIENT HEADROOM AND PRESENTED A STRIKE HAZARD (REQUIRED TO BE A MINIMUM OF 77 INCHES OFF DECK).
- LIFTING PADEYE DID NOT HAVE A WEIGHT TEST PLATE/PLATE WAS NOT IN DIRECT VICINITY OF THE PADEYE (INITIAL TEST DATE OR DATE OF RETEST AFTER REPAIR REQUIRED).
- CHAINFALL/ELECTRIC OR PNEUMATIC CHAIN HOIST LACKED A WEIGHT TEST TAG (REQUIRED TEST EVERY 4 YEARS).

NAVSEA GSO 572J SHIP SPEC 572 (APPLICABLE TO NEW CONSTRUCTION ONLY) NSTM SECTION 572-3.4.1

GEN SAFETY, MILLING MACHINES

POINT-OF-OPERATION GUARD (MOVABLE SAFETY SHIELD) WAS NOT INSTALLED ON THE MILLING MACHINE.

GOV'T SOURCE OF UNIVERSAL MACHINE GUARDS- ROCKFORD SYSTEMS, INC. AT 1-800-922-7533 OR E-MAIL SALES@ROCKFORDSYSTEMS.COM..

OPNAVINST 5100.19D C1304G(5) NAVSEA GSO 665 C SHIP SPEC 665 B (APPLICABLE TO NEW CONSTRUCTION ONLY) ANSI B11.8 29 CFR 1910.212 SAFETY PRECAUTIONS AND OPERATING PROCEDURES WERE NOT POSTED AT THE FOLLOWING INDUSTRIAL EQUIPMENT OR MACHINERY:

NOTE: HMC&M HMIS CD-ROM CONTAINS THE LATEST SAFETY EQUIPMENT SHOPPING GUIDE WITH ALL SAFETY PRECAUTION SIGNS LISTED WITH ORDERING INFORMATION.

OPNAVINST 5100.19D, C0104F(1) GSO 602 SHIP SPEC 602 (APPLICABLE TO NEW CONSTRUCTION ONLY)

GEN SAFETY, ROTATING MACHINERY GUARDS

POWER TRANSMISSION DEVICES, SUCH AS CHAINS, SEWING MACHINE PULLEYS, SHAFTING, FLY WHEELS, GEARS, SPROCKETS AND OTHER MOVING PARTS OF MACHINE OTHER THAN THE POINT-OF-OPERATION (CITE LOCATION) WERE NOT ENCLOSED WITHIN THE MACHINE OR OTHERWISE GUARDED OR LOCATED SO THAT PERSONNEL CONTACT WITH MOVING PART WAS NOT POSSIBLE.

GOV'T SOURCE OF UNIVERSAL MACHINE GUARDS- ROCKFORD SYSTEMS, INC. AT 1-800-922-7533 OR E-MAIL SALES@ROCKFORDSYSTEMS.COM.

OPNAVINST 5100.19D C1304A(17)
NAVSEA GSO 665
SHIP SPEC 665 (APPLICABLE TO NEW CONSTRUCTION ONLY)
ANSI B11.19
29 CFR 1910.212

GEN SAFETY, SAFETY HAZARDS

SLIP/TRIP OR FALL HAZARDS WERE NOTED IN THE FOLLOWING LOCATIONS:

OVERHEAD OBSTRUCTIONS WERE NOTED IN THE FOLLOWING LOCATIONS:

OPNAVINST 5100.19D, C0102 SHIP SPEC 070 (APPLICABLE TO NEW CONSTRUCTION ONLY)

GEN SAFETY, SAFETY NETS

ACCESS TRUNK SAFETY NETS WERE NOT INSTALLED OR WERE DEFICIENT AS INDICATED:

- WERE NOT INSTALLED AT 17 FOOT MAXIMUM INTERVALS.
- NET WAS NOT WITHIN 24 INCHES OF THE TOP LADDER RUNG.
- SAFETY NET WAS INCORRECT SIZE.
- NET OPENING WAS GREATER THAN 24 INCHES FROM ONE SIDE OF THE NET TO THE OTHER.
- NET WAS GREATER THAN 16 PLUS OR MINUS 2.5 INCHES FROM THE LADDER FACE.
- SAFETY NET WAS MISSING.
- SAFETY NET WAS DAMAGED.
- SAFETY NET WAS OBSTRUCTED.
- SAFETY NET LACKED WEIGHT TEST TAG (TESTED AT MANUFACTURE).
- SAFETY NET HAD GREATER THAN 4 INCHES OF NATURAL SAG.
- ACCESS TRUNKS HAD HORIZONTAL OBSTRUCTION (ABOVE THE SAFETY NET) WHICH PROJECTED MORE THAN 6 INCHES FROM THE VERTICAL TRUNK SIDE.

GEN SPECS 612 NAVSEA GSO 612

SHIP SPEC 612 (APPLICABLE TO NEW CONSTRUCTION ONLY) NAVSEA DRAWING 804-5184163 REV A

GEN SAFETY. SAW BLADE GUARDS

GUARD WAS NOT INSTALLED ON THE TABLE SAW/CIRCULAR SAW/RIP SAW/RADIAL SAW/BAND SAW.

GOV'T SOURCE OF UNIVERSAL MACHINE GUARDS- ROCKFORD SYSTEMS, INC. AT 1-800-922-7533 OR E-MAIL SALES@ROCKFORDSYSTEMS.COM.

OPNAVINST 5100.19D, C1304G 29CFR 1910.212 SHIP SPEC 665 (APPLICABLE TO NEW CONSTRUCTION ONLY) ANSI B11.10

GEN SAFETY, SECURE FOR SEA

LOCKERS/MACHINES/EQUIPMENT/CABINETS/HEAVY GEAR WERE NOT FIRMLY SECURED TO THE DECK/TABLE TOP/BULKHEAD IN THE LISTED SPACE(S):

OPNAVINST 5100.19D, C0102 NAVSEA GSO 665 F

GEN SAFETY, SLIP HAZARDS

THREE SLIP-RESISTANT TREADS (MINERAL-COATED TREADS, 6 INCHES BY 24 INCHES) WERE NOT PROVIDED AT THE HEAD AND FOOT OF NUMEROUS LADDERS, ON BOTH SIDES OF DOORS AND ARCHES WITH HIGH COAMING USED FOR CONTINUOUS TRAFFIC, AND AT BOTH SIDES OF CREW MESSING SPACE DOORS.

OPNAVINST 5100.19D, C0102 NAVSEA GSO 634 C SHIP SPEC 634 (APPLICABLE TO NEW CONSTRUCTION ONLY)

GEN SAFETY. WORKSHOP SAFETY MARKINGS

WORKSHOP DECK MARKINGS HAD THE FOLLOWING DEFICIENCIES:

- OPERATOR WORK AREAS WERE NOT MARKED AS SOLID YELLOW AREAS WHERE THE OPERATOR STANDS.
 - NON-SKID MATERIAL WAS NOT APPLIED IN THE OPERATOR WORK AREA.
 - THE MONORAIL/OVERHEAD OBSTRUCTIONS WERE NOT COLOR-CODED SOLID YELLOW.
- EYE HAZARDOUS AREAS WERE NOT OUTLINED IN YELLOW AND BLACK CHECKERBOARD OR STRIPING (3 INCHES BY 6 INCHES).

OPNAVINST 5100.19D, C1304, B0504B
NAVSEA GSO 665
SHIP SPEC 665 (APPLICABLE TO NEW CONSTRUCTION ONLY)
SHIPS SPEC 602 (MONORAIL COLOR CODE) (APPLICABLE TO NEW CONSTRUCTION ONLY)
29 CFR 1910.144
ANSI Z53.1-1979

INDUSTRIAL VENTILATION SYSTEM INSPECTION ITEMS:

VENTILATION SYSTEMS USED FOR AIR CONTAMINANT CONTROL IN INDUSTRIAL SPACES WILL BE EVALUATED FOR THEIR FUNCTION AND CONDITION. MEASUREMENT DATA FROM THE BASELINE IH SURVEY WILL BE COMPARED TO READINGS TAKEN BY THE INSPECTION TEAM OR THEIR TECHNICAL ASSISTANTS.

FOR ANY SHIP (I.E., DDG-51 CLASS & LHD-2 CLASS) WITH A CBR COLLECTIVE PROTECTION SYSTEMS (CPS), ALL CRITERIA IS APPLIED TO THE VENTILATION SYSTEM WITH CPS SET AND THE ZONES, WHERE THE VENT SYSTEMS ARE LOCATED, PRESSURIZED.

VENTILATION, ABRASIVE BLAST CABINET

ABRASIVE BLASTING CABINET EXHAUST VENTILATION SYSTEM:

- WAS INADEQUATE.
- WAS NOT INSTALLED.
- WAS NOT EQUIPPED WITH LOCAL EXHAUST VENTILATION/DUST COLLECTOR.
- WAS INOPERABLE.
- WAS LEAKING DUE TO DAMAGED GASKETS OR GLOVE ATTACHMENTS.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM SANDBLASTING DUST UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY) OPNAVINST 5100.19D

G. 14.0.1.01.05.105

VENTILATION, ACID BATTERY CHARGING AREA VENTILATION, ALKALINE BATTERY CHARGING AREA

- EXHAUST VENTILATION AIRFLOW WAS INADEQUATE AT THE BATTERY CHARGING RACK.
- BATTERY CHARGING AREA/RACK DID NOT HAVE LOCAL EXHAUST VENTILATION.
- THE EXHAUST VENTILATION IN THE BATTERY CHARGING AREA WAS NOT INTERLOCKED TO ENERGIZE WHEN THE BATTERY CHARGERS ARE USED.
 - THE VENTILATION HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM EXPOSURE TO ACID GASES UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D, C0904 SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTUATION AVIATION ELAMANARIE LIO CTRA

VENTILATION, AVIATION FLAMMABLE LIQ STRM VENTILATION, FLAMMABLE GAS CYLINDER STRM VENTILATION, NON-FLAMMABLE GAS CYLINDER STRM VENTILATION, FLAMMABLE LIQUID STRM VENTILATION, PAINT MIXING AND ISSUE ROOM

- MECHANICAL EXHAUST VENTILATION SYSTEM DID NOT PROVIDE A FOUR (4) MINUTE RATE OF CHANGE (15 AIR CHANGES PER HOUR) IN THE _______.

NOTE: RATE OF CHANGE (MIN)= INDICATES A REQUIREMENT FOR VENTILATION AT A RATE SUFFICIENT TO ENSURE ONE COMPLETE AIR CHANGE IN THE TIME (MINUTES) INDICATED.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC VAPORS AND REDUCE THE FIRE HAZARD UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, AVIATION FUELS LAB HOOD

VENTILATION, OIL LAB HOOD

VENTILATION, BIOCHEM LABORATORY HOOD

VENTILATION, PROSTHETICS LABORATORY HOOD

- WAS NOT PROVIDED.
- HAD INADEQUATE AIR FLOW.
- WAS POORLY DESIGNED.
- DID NOT HAVE THE SASH HEIGHT MARKED FOR 100 FPM FACE VELOCITY.
- WAS NOT EVALUATED BY AN INDUSTRIAL HYGIENIST.
- WAS INOPERABLE.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC VAPORS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, CANOPY HOOD

MECHANICAL EXHAUST VENTILATION CANOPY HOOD IN THE FOLLOWING LOCATION WAS DEFICIENT AS FOLLOWS:

- A CANOPY HOOD WAS INCORRECTLY INSTALLED.
- HOOD VENTILATION SYSTEM WAS INOP.
- AIR FLOW WAS INADEQUATE FOR HEAT CONTROL.
- WAS NOT EVALUATED BY AN INDUSTRIAL HYGIENIST.

NOTE: CANOPY HOODS ARE ONLY USED FOR HEAT CONTROL, SUCH AS OVER BAKE OVENS, AND NOT AIR CONTAMINANT CONTROL. WITH A CANOPY HOOD, CONTAMINATED AIR WOULD BE DRAWN THROUGH THE WORKER'S BREATHING ZONE TO REACH THE EXHAUST HOOD, VICE REMOVED AT THE SOURCE.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, COMPOSITE SHOP HOOD FLEXIBLE HOOD LOCAL EXHAUST

VENTILATION, PARTS CLEANING TANK HOOD VENTILATION, VARNISH TANK HOOD VENTILATION, SLOT HOOD VENTILATION, PHOTO LAB CHEMICAL MIXING AREA VENTILATION, ULTRASONIC CLEANER LOCAL EXHAUST VENTILATION LAMINAR AIR FLOW HOOD VENTILATION, DOWNDRAFT HOOD

VENTILATION, FILTER CLEANING SHOP HOOD

- WAS NOT PROVIDED.
- WAS INADEQUATE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.
- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- WAS INOPERABLE.
- WAS MISSING DUCTING, HOOD END, BAFFLES (SPECIFY).

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY) GSO 512

VENTILATION, CORROSIVES STOREROOM VENTILATION, OXIDIZER STOREROOM VENTILATION, JP-5 PUMP ROOM VENTILATION, MOGAS PUMP ROOM VENTILATION, SEWAGE/CHT PUMP ROOM VENTILATION, MOTOR PUMP ROOM

- MECHANICAL EXHAU	JST VENTILATION SYSTEM DID	NOT PROVIDE A SIX	(6) MINUTE RATE OF
CHANGE (10 AIR CHANGE	ES PER HOUR) IN THE		

NOTE: RATE OF CHANGE (MIN)= INDICATES A REQUIREMENT FOR VENTILATION AT A RATE SUFFICIENT TO ENSURE ONE COMPLETE AIR CHANGE IN THE TIME (MINUTES) INDICATED.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, DRY CLEANING PLANT

IN THE DRY CLEANING SHOP, LOCAL EXHAUST VENTILATION:

- WAS NOT PROVIDED.
- WAS INADEQUATE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.

- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- WAS NOT PROVIDED 9 INCHES OFF THE DECK.
- WAS INOPERABLE.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, DUCT/FAN/DIFFUSER NOISE

EXCESSIVE NOISE WAS NOTED FROM THE DUCT/FAN/DIFFUSER IN THE FOLLOWING LOCATION:

ACOUSTICAL TREATMENT WAS MISSING IN THE FOLLOWING LOCATIONS:

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM HAZARDOUS NOISE UNTIL THE PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY) OPNAVINST 5100.19D, APPENDIX B4-3

VENTILATION, ENGINEERING SPACES

VENTILATION IN MAIN ENGINEERING SPACES (CITE LOCATION):

- WAS INADEQUATE.
- WAS INOPERABLE.
- WAS DIRTY.
- WAS MISSING ADJUSTABLE BELL MOUTH TERMINALS/TERMINALS WERE PAINTED IN PLACE.
- NEGATIVE PRESSURE DIFFERENTIAL OF AT LEAST -0.25 INCHES OF WATER GAGE PRESSURE WAS NOT MAINTAINED WITH THE ACCESS DOORS CLOSED AND THE EXHAUST AND SUPPLY VENTILATION FANS OPERATING ON HIGH SETTING.

NOTE - STEAM POWERED SHIPS REQUIRE EXHAUST VENTILATION TOTAL AIRFLOW TO BE 125 PERCENT OF THE MECHANICAL SUPPLY VENTILATION TOTAL AIRFLOW, GAS TURBINE POWERED SHIPS REQUIRE EXHAUST VENTILATION TOTAL AIRFLOW TO BE 110 PERCENT OF THE SUPPLY VENTILATION.

- ADJUSTABLE SPOT COOLER BLAST TYPE E-TERMINAL(S), CONSTRUCTED OF CORROSION RESISTANT STEEL, WERE NOT INSTALLED AT EACH WATCH STATION IN THE MAIN. SUPPLY VENTILATION TERMINALS MUST BE LOCATED WITHIN 3-5 FEET OF WATCHSTANDERS.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D, CHAPTER B2

VENTILATION, HAZMAT STORAGE AREAS

ADEQUACY OF VENTILATION IN (HAZMAT OR OTHER) STOWAGE AREAS HAD NOT BEEN CHECKED BY AN INDUSTRIAL HYGIENE OFFICER.

VENTILATION READINGS IN THE FOLLOWING STORAGE AREAS WERE NOT INCLUDED IN THE SHIP'S BASELINE OR FOLLOW-UP IH SURVEY:

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

OPNAVINST 5100.19D, B0304B(4), C2305B NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY) GSO 512 OPNAVINST 5100.19D

VENTILATION, HAZMINCEN ISSUE ROOM

- ADEQUACY OF VENTILATION IN THE HAZMINCEN HAD NOT BEEN CHECKED BY AN INDUSTRIAL HYGIENE OFFICER.
- VENTILATION READINGS IN THE HAZMINCEN WAS NOT INCLUDED IN THE SHIP'S BASELINE OR FOLLOW-UP IH SURVEY.
- MECHANICAL EXHAUST VENTILATION SYSTEM DID NOT PROVIDE A FOUR (4) MINUTE RATE OF CHANGE (15 AIR CHANGES PER HOUR).
- MECHANICAL EXHAUST AND SUPPLY VENTILATION SYSTEMS DID NOT MAINTAIN PROPER NEGATIVE PRESSURE OF 0.25 INCHES OF WATER GAGE PRESSURE) WHEN THE ACCESS DOORS WERE CLOSED.

NOTE: RATE OF CHANGE (MIN)= INDICATES A REQUIREMENT FOR VENTILATION AT A RATE SUFFICIENT TO ENSURE ONE COMPLETE AIR CHANGE IN THE TIME (MINUTES) INDICATED.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

OPNAVINST 5100.19D, B0304B(4), C2305B NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY) GSO 512 OPNAVINST 5100.19D

VENTILATION, LAUNDRY

IN THE LAUNDRY, VENTILATION:

- WAS NOT PROVIDED.
- WAS INADEQUATE/INOPERABLE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.
- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- WAS NOT PROVIDED AT EACH PRESS AND AT THE WORKER LOCATION BETWEEN THE PRESSES.
 - ADJUSTABLE BLAST TERMINAL SPOT COOLERS WERE NOT PROVIDED FOR WORKERS.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, SCULLERY

SCULLERY EXHAUST VENTILATION:

- WAS NOT PROVIDED.
- WAS INADEQUATE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.
- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- WAS INOPERABLE.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY) OPNAVINST 5100.19D

VENTILATION, SPRAY PAINTING BOOTH

SPRAY PAINTING BOOTH LOCAL EXHAUST VENTILATION:

- WAS NOT PROVIDED.
- WAS INADEQUATE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.
- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- WAS INOPERABLE.
- LACKED A MAGNEHELIC GAUGE FOR FILTER CHANGING.
- HAD DIRTY/CLOGGED FILTERS.
- WAS MISSING THE FILTERS.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, WELDING LOCAL EXHAUST, FLEXIBLE HOOD VENTILATION, WELDING BOOTH

- WAS NOT PROVIDED.
- WAS INADEQUATE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.
- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- LACKED A HOOD ON THE END OF THE FLEX HOSE.
- DID NOT HAVE 1500 FPM FACE VELOCITY AT THE HOOD OPENING.
- DID NOT REACH THE WORK SURFACE.
- WAS INOPERABLE.
- HAD A DIRTY SCREEN.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL

NSTM 074 VOL 1
OPNAVINST 5100.19D
SHIP SPEC 512 AND 665 (APPLICABLE TO NEW CONSTRUCTION ONLY)

VENTILATION, WOODWORKING SHOP PROCESSES
VENTILATION, WORKSHOP PROCESSES

- WAS NOT PROVIDED.
- WAS INADEQUATE/INOPERABLE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.
- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- DID NOT HAVE A DUST COLLECTOR SYSTEM.
- HAD AN INOPERABLE/INADEQUATE DUST COLLECTOR.
- HAD DAMAGED DUCTING TO THE DUST COLLECTOR.
- DID NOT REMOVE SAW DUST FROM THE WORK SITE.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL SHIP SPEC 512 AND 665 (APPLICABLE TO NEW CONSTRUCTION ONLY) OPNAVINST 5100.19D

VENTILATION, X-RAY DEVELOPER LAB

IN THE X-RAY DEVELOPER LAB, LOCAL EXHAUST VENTILATION:

- WAS NOT PROVIDED.
- WAS INADEQUATE.
- WAS POORLY DESIGNED.
- HAD LOW AIR FLOW.
- HAD NOT BEEN EVALUATED BY AN INDUSTRIAL HYGIENIST.
- WAS INOPERABLE.

NOTE: INTERIM ACTION MUST BE TAKEN TO PROTECT PERSONNEL FROM TOXIC AIR CONTAMINANTS UNTIL THE VENTILATION PROBLEM IS CORRECTED. CONTACT YOUR LOCAL NEPMU OR MTF FOR INDUSTRIAL HYGIENE SUPPORT TO TEST THE SYSTEM AFTER CORRECTION.

NAVSEA 0938-LP-018-0010 - DESIGN CRITERIA MANUAL OPNAVINST 5100.19D SHIP SPEC 512 (APPLICABLE TO NEW CONSTRUCTION ONLY)